International Journal of Kannada Research
www.kannadajournal.com

ISSN: 2454–5813
IJKR 2020; 6(4): 91-94

www.kannadajournal.com
Received: 08-08-2020
Accepted: 13-09-2020

ಸುಶೀಲಾದೇವಿ ಬಿ ಬೇಟಗೇರಿ
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ಜನಪದ ಸಾಹಿತ್ಯ: ಲಾವಣಿಗಳಲ್ಲಿ ಸ್ವಾತಂತ್ರ್ಯದ ಧ್ವನಿ

ಸುಶೀಲಾದೇವಿ ಬಿ ಬೇಟಗೇರಿ

ಬಂದ ಜನಾ ಕೇಳಿರಿ ಇಂದು ನಾನು ಹೇಳತೇನಿ
ಚಂದದಿ ಸ್ವಾತಂತ್ರ್ಯ ಹೋರಾಟಗಾರರ ಕಥೆಯನ್ನು
ಚೆನ್ನಮ್ಮನ ಕಾಳಗವನ್ನು ಸಿಂಧೂರ ಲಕ್ಷ್ಮಣನ ಯುದ್ಧವನ್ನು
ಸ್ವಾತಂತ್ರ್ಯಕ್ಕೆ ನೀಡಿದ ಕೊಡುಗೆಯನ್ನು
ಚಿತ್ತವಿಟ್ಟು ಕೇಳಿರಪ್ಪ/ಕೇಳಿರವ್ವ ಸಂಪೂರ್ಣ.....

"ಸ್ವಾತಂತ್ರ್ಯ ನಮ್ಮ ಜನ್ಮಸಿದ್ದು ಹಕ್ಕು"ಎಂಬ ಬಾಲಗಂಗಾಧರ ತಿಲಕರ ಮಾತಿನಂತೆ ಸ್ವತಂತ್ರ್ಯ ಪಡೆದುಕೊಳ್ಳುವುದು ಅಷ್ಟೇ ನಮ್ಮ ಕರ್ತವ್ಯವಾಗಿದೆ.ಈ ಸ್ವಾತಂತ್ರ್ಯವನ್ನು ಸಂಗ್ರಾಮದ ಮೂಲಕ ಪಡೆದುಕೊಳ್ಳುದು ಆಗಿದೆ.ಏಕೆಂದರೆ ನಮ್ಮ ಭಾರತ ದೇಶವನ್ನು ಬ್ರಿಟಿಷರು ಆಳುತ್ತಿರುವುದರಿಂದ ಹೋರಾಟ ಅನಿವಾರ್ಯವಾಯಿತು.ಸಂಗ್ರಾಮವೆಂದರೆ ಯುದ್ಧ, ಕಾಳಗ ಎಂದರ್ಥ.ಕನ್ನಡ ಸಾಹಿತ್ಯದಲ್ಲಿ ಬರುವಂತ ಒಂದು ವಿಧ ಜನಪದ ಸಾಹಿತ್ಯ.ಈ ಸಾಹಿತ್ಯದಲ್ಲಿ ಬರುವಂತ ಒಂದು ವಿಧ ಲಾವಣಿಗಳು.ಈ ಲಾವಣಿಗಳು ಸಿಂಧೂರ ಲಕ್ಷ್ಮಣ ಮತ್ತು ಚನ್ನಮ್ಮ ರಾಣಿಯ ಕಾಳಗ ಇವುಗಳಲ್ಲಿ ಸ್ವಾತಂತ್ರ್ಯದ ಧ್ವನಿ ಹೇಗಿದೆಯೆಂಬುದನ್ನು ನೋಡೋಣ. ಇಬ್ಬರೂ ಉತ್ತರ ಕರ್ನಾಟಕದ ಹೆಬ್ಬುಲಿಗಳು.ಸ್ವಾತಂತ್ರ್ಯ ಹೋರಾಟದಲ್ಲಿ ರಕ್ತ ತಪರಣ ಮಾಡಿ,ಆತ್ಮಾರ್ಪಣೆ ಮಾಡಿ ಭಾರತ ಮಾತೆಯ ಪುಣ್ಯ ಭೂಮಿಗೆ ಸ್ವತಂತ್ರ್ಯ ತಂದು ಕೊಟ್ಟಿದ್ದು ನಮ್ಮೆಲ್ಲರಿಗೂ ಸ್ಮರಣೀಯರು.ಇನ್ನೊಂದು ಬಾಗಲಕೋಟ ಜಿಲ್ಲೆಯ ಸಿಂಧೂರ ಲಕ್ಷ್ಮಣ ಇವರಿಬ್ಬರು ನಮ್ಮೆರಡು ಕೆಂಗಣ್ಣದ ಹೆಬ್ಬುಲಿಗಳು.ಎಲ್ಲ ಅರ್ಥದಲ್ಲಿ ಬದುಕಿಗಾಗಿ ಬರೆದವರು,ಬರದೇ ಬದುಕಿದವರು.ಜನಪದರು."ಭಾವನೆಗಳೇ ಬರಹ,ಬರಹವೇ ಭಾವನೆಗಳ ಸಂಗಮ" ಜನಪದರು ಬದುಕಿನ ವಿಸ್ತಾರವಾದ ಅನುಭವ ದ್ರವ್ಯವನ್ನು ಸುಲಭವಾಗಿ ತಮ್ಮ ಹಾಡುಗಳಲ್ಲಿ ಹಿಡಿದಿಟ್ಟವರು.ಸಮರ್ಥ ಮತ್ತು ಸಾಧನೆಗಳ ಸ್ಪಷ್ಟ ಹಾಗೂ ಖಚಿತವಾದ ಚಿತ್ರ ಸಿಗಲು ಸಾಧ್ಯ ಜನಪದರ ಭಾವನೆಗಳು ಸಿದ್ಧಾಂತ ಮಾತ್ರ ಆಗಲಿಲ್ಲ ಅದು ಸಾಹಿತ್ಯದಲ್ಲಿ ಬರುವ ಸಾಹಾನುಭೂತಿಯೂ ಆಗಲಿಲ್ಲ ಇವೆರಡನ್ನೂ ಮೀರಿದ ಸ್ವಾತಂತ್ರ್ಯದ ಬದುಕನ್ನು ಮೇಲಕ್ಕೆತ್ತುವ ಕ್ರಿಯಾತ್ಮಕ ಕಾಳಜಿಯನ್ನು ಇಟ್ಟುಕೊಂಡ ಕಾರಣಕ್ಕಾಗಿಯೇ ಜನಪದ ಸಾಹಿತ್ಯವು ಇಂದಿಗೂ ಪ್ರಾಂತೀಯ ಕಿಡಿಯಾಯಿತು."ಅರಿತಷ್ಟು ಮತ್ತು ಆಧರಿಸಿದಷ್ಟು"ಇವರ ಮೌಲ್ಯಗಳು ನಮಗೂ ಮಾದರಿಯಾಗಿವೆ.ಭಾರತಮಾತೆಯು ಸ್ವತಂತ್ರ್ಯ ಭೂಮಿಯನ್ನು ಪಡೆಯಬೇಕಾದರೆ ಭಾರತದ ಮಣ್ಣಲ್ಲಿ ಹುಟ್ಟಿ ಬೆಳೆದ ಮಹಿಳೆಯರದೇ ಮುಕ್ಕಾಲು ಪಾಲು ಇದೆ.ಸ್ವಲ್ಪ ತಪ್ಪಾದೀತು.ತುಂಬಾ ಇದೆ ಹೇಳವುದು ಒಳಿತು.ಕಣ್ಣ ಮುಂದೆ ಸುಳಿಯುವ ಮಹಾನ್ ಚೇತನಗಳು.ಕಿತ್ತೂರು ಚೆನ್ನಮ್ಮ,ಉಳ್ಳಾಲದ ರಾಣಿ ಅಬ್ಬಕ್ಕದೇವಿ,ಝಾನ್ಸಿರಾಣಿ ಲಕ್ಷ್ಮೀಬಾಯಿ,ನೀವೆದಿತಾ ಕಸ್ತೂರಿ ಬಾ ಗಾಂಧಿ ಮುಂತಾದವರು.ಅದಕ್ಕೆ ಭಾರತ ದೇಶವನ್ನು ಮೇರಾ ಭಾರತ ಮಹಾನ್‌ಯೆಂದು ಕರೆಯುವರು.ಬ್ರಿಟಿಷರ ಜೊತೆ ಹೋರಾಟ ಮಾಡುತ್ತಾ,ಮಾಡುತ್ತಾ ಪ್ರಾಣ ಬಿಡುವ ಸಂದರ್ಭದಲ್ಲಿ ಕೇಳುತ್ತಾಳೆ.ನಾನು ಪ್ರಾಣ ಬಿಡುವ ಸಮಯಕ್ಕಿಂತ ನನ್ನನ್ನು ಭಾರತದ ಪುಣ್ಯ ನೆಲದಲ್ಲಿ ಇಡಿ.ಅಂದರೆ ಇನ್ನೂ ಬ್ರಿಟಿಷರ ವಶವಾಗದೇ ಇರುವ ನೆಲದಲ್ಲಿ ಹಾಕಿ ಆ ಹೆಣ್ಣು ಮಗಳು ಹೋರಾಡುತ್ತಾ ಸ್ವತಂತ್ರ್ಯ ಭಾರತ ಕಲ್ಪನೆ ಎಷ್ಟೆಯೆಂಬುದು ತೋರುತ್ತದೆ.ಹಾಗಾಗಿ ಭಾರತ ನೆಲದಲ್ಲಿ ಪ್ರಾಣ ಬಿಡುತ್ತಾಳೆ. ಝಾನ್ಸಿರಾಣಿ ಲಕ್ಷ್ಮೀಬಾಯಿ ಸ್ವತಂತ್ರ್ಯಕ್ಕಾಗಿ ತನ್ನ ಗಂಡನನ್ನು ಕಳೆದುಕೊಂಡು ಕೊನೆಗೆ ಬೆನ್ನಿಗೆ ಕಟ್ಟಿಕೊಂಡು ಹೋರಾಟ ಮಾಡುತ್ತಾ ಈ ನೆಲಕ್ಕಾಗಿ ಪ್ರಾಣಬಿಟ್ಟಿರುವುದು ಸಾಮಾನ್ಯವಾದ ಸಂಗತಿಯನ್ನು ಸಹೋದರಿ ನೀವೇದಿತಾರವರು ಸ್ವತಂತ್ರ್ಯ ಭಾರತ ಹೋರಾಟಕ್ಕಾಗಿ ಸಾಕಷ್ಟು ದುಡಿದರು.ಸರ್ ಸುಭಾಸ್ ಚಂದ್ರ ಬೋಸ್‌ರವರು "ಅಜಾದ್ ಹಿಂದ ಫೌಜ್"ಎಂಬ ಸೈನ್ಯವನ್ನು ಕಟ್ಟಿದಾಗ ಮಹಿಳೆಯರ

ಪಡೆಯೊಂದು ಬೋಸ್‌ರಿಗೆ ರಕ್ತ ತಿಲಕ ಇಟ್ಟು ತಮ್ಮ ಸ್ವಾತಂತ್ರ್ಯಕ್ಕಾಗಿ ಸಮರ್ಪಣೆ ಮಾಡಿಕೊಂಡ ಚಿತ್ರಣವು ಸಾಹಿತ್ಯದಲ್ಲಿ ನಮ್ಮೆಲ್ಲರಿಗೂ ಆದರ್ಶಪ್ರಾಯವಾಗಿದೆ.ಮತ್ತು ಕಸ್ತೂರಿ ಬಾ ಗಾಂಧಿಯವರು ಸ್ವಾತಂತ್ರ್ಯ ಭಾರತಕ್ಕೆ ಕೊಟ್ಟ ಇಡೀ ಹೋರಾಟದ ಚಿತ್ರಣವು ನಮಗೆ ಸಾಹಿತ್ಯದಲ್ಲಿ ಸಾಕಷ್ಟು ಕೊಡುಗೆಯಾಗಿ ನೀಡಿದೆ."ನಾವು ವೀರ ಭಾರತೀಯರು ರಣರಂಗದ ಕಲಿಗಳು ಯುದ್ಧ ಭೂಮಿಯಲ್ಲಿ ಬದ್ಧ ವೈರಿಗಳು ನಾವು"ಜನಪದ ಸಾಹಿತ್ಯ ಒಬ್ಬರ ಮಾತು ಅಥವಾ ಹಾಡಿನಲ್ಲಿ ಕಾಣಿಸಿಕೊಡಿರುವ ಅದು ಮೂಲತ: ಸಮೂಹ ಸೃಷ್ಟಿ,ಮೂಲದಲ್ಲಿದ್ದದು ಒಬ್ಬರಿಂದೊಬ್ಬರಿಗೆ ಆಕಾರ ಪಡೆಯುತ್ತಾ ಹೊಸತನ ಒಳಗೊಳ್ಳುತ್ತ ಎತ್ತಿಕೊಂಡವರ ಕೂಸಾಗುತ್ತದೆ.ಜನಪದರು ಭಾವುಕರು ಆಗಿರುವಂತೆ ಕಷ್ಟಗಳನ್ನು ಎದುರಿಸುವ ಸಹಿಸುವ ಸಾಹಸಿಗಳೂ ಹೌದು.ಇದಕ್ಕೆ ವೀರಗಲ್ಲುಗಳೇ ಸಾಕ್ಷಿ.ಸಮೂಹದ ಒಳಿತಿಗಾಗಿ,ನಂಬಿದವರ ಹಿತಕ್ಕಾಗಿ,ವೈರಿಗಳ ಹುಟ್ಟಡಗಿಸುವ ಸ್ವಾಭಿಮಾನಕ್ಕಾಗಿ ಪ್ರಾಣವನ್ನೇ ಪಣಕ್ಕಿಡುತ್ತಾರೆ.ಅಂಥ ಅಸಾಧಾರಣ ಗುಣವುಳ್ಳವರನ್ನು ಆದರ್ಶವಾಗಿಸಿಕೊಳ್ಳುತ್ತಾರೆ. ಅವರ ಮೇಲೆ ಕಥೆ ಕಾವ್ಯಗಳನ್ನು ಕಟ್ಟಿ ಅಮರರನ್ನಾಗಿಸುತ್ತಾರೆ.ಅಂತವರು ಮತ್ತೆ ಮತ್ತೆ ಹುಟ್ಟಿ ಬರಲೆಂದು ಹಾರೈಸುತ್ತಾರೆ. ಕಿತ್ತೂರು ಚನ್ನಮ್ಮ,ಬೆಳವಡಿ ಮಲ್ಲಮ್ಮ, ಒನಕೆ ಒಬವ್ವ,ಸಿಂಧೂರ ಲಕ್ಷಣ,ಸಂಗೊಳ್ಳಿ ರಾಯಣ್ಣ, ನರಗುಂದ ಬಾಬಾಸಾಹೇಬ, ಕುಮಾರರಾಮ, ಕೆಂಪೇಗೌಡ, ಮುಂತಾದ ಸೌಂಸ್ಕೃತಿಕ ವಿವರ ಕುರಿತಾದ ಕಥನಗೀತೆ, ಲಾವಣಿಗಳು ನಿದರ್ಶನಗಳಾಗಿವೆ.ಕಿತ್ತೂರ ಸಂಸ್ಥಾನ ಚನ್ನಮ್ಮ ಮತ್ತು ಚನ್ನಮ್ಮನ ಬಂಟ ಸಂಗೊಳ್ಳಿ ರಾಯಣ್ಣನ ಕುರಿತು ಸಾಹಿತ್ಯವಿದೆ.ಅಂಥ ಸಾಹಿತ್ಯವುಳ್ಳ ಕೃತಿಗಳಲ್ಲಿ ಡಾ.ಎಂ.ಎಂ.ಕಲಬುರ್ಗಿ,ಡಾ.ಚನ್ನಕ್ಕ ಪಾಪಟಿ,ಅವರು ಸಂಪಾದಿಸಿರುವ ಕಿತ್ತೂರ ಸಂಸ್ಥಾನ ಸಾಹಿತ್ಯ ಕೃತಿಯೂ ಒಂದಾಗಿದೆ.ಗದಗದ ಶ್ರೀ ಜಗದ್ಗುರು ತೋಂಟದಾರ್ಯ ಮಠದ ವೀರಶೈವ ಅಧ್ಯಯನ ಸಂಸ್ಥೆಯಿಂದ ಈ ಕೃತಿ ಪ್ರಕಟಗೊಂಡಿದೆ.ಪಸ್ತುತ ಚನ್ನಮ್ಮ ರಾಣಿಯ ಕೊನೆಯ ಕಾಳಗ ಈ ಮೇಲಿನ ಕೃತಿಯಿಂದ ಆಯ್ದಕೊಳ್ಳಲಾಗಿದೆ.ವೈರಿ ಸೆರೆ ಸಿಕ್ಕರೂ ಸೇಡಿಗೆ ಮುಂದಾಗದೆ ಧರ್ಮ ಪಾಲಿಸುವ ಚನ್ನಮ್ಮ ತಮ್ಮವರಿಂದಲೇ ಸೋಲಬೇಕಾಗಿ ಬಂದ ದುರಂತ.ಈ ಕಥಾನಕದಲ್ಲಿದೆ.ಚನ್ನಮ್ಮ ರಾಣಿಯ ಕೊನೆಯ ಕಾಳಗದಲ್ಲಿ ಚನ್ನಮ್ಮ ರಾಣಿಯ ಶೌರ್ಯವನ್ನು ಕಂಡು ಕಂಪನಿ ಸರಕಾರವು ಅಚ್ಚರಿಗೊಂಡಿತು.

ಕಿತ್ತೂರು ರಾಣಿ ಚನ್ನಮ್ಮ (೧೭೭೮–೧೮೨೯) ಸ್ವಾತಂತ್ರ್ಯ ಸ್ವಾಭಿಮಾನಿಗಳ ಸಾಕಾರಮೂರ್ತಿ ಕಿತ್ತೂರಿನ ದೇಸಾಯಿಗಳಲ್ಲಿ ಪ್ರಸಿದ್ಧನಾದ ಮಲ್ಲಸರ್ಜನ ಕಿರಿಯ ಹೆಂಡತಿ.ತನ್ನ ಪುಟ್ಟ ರಾಜ್ಯದ ಸ್ವಾತಂತ್ರ್ಯ ರಕ್ಷಣೆಗಾಗಿ ಬ್ರಿಟಷರ ದೊಡ್ಡ ಸೈನ್ಯದ ವಿರುದ್ಧ ಸೆಟೆದು ನಿಂತು ನೆಡೆಸಿದ ಹೋರಾಟ.ಅಲ್ಲಿ ತೋರಿಸಿದ ಧೈರ್ಯ, ಸಾಹಸ, ಕೆಚ್ಚುಗಳು ಚನ್ನಮ್ಮನನ್ನು ಅಜರಾಮರವಾದ ಕೀರ್ತಿ ಶಿಖರಕ್ಕೇರಿಸಿವೆ.ಚನ್ನಮ್ಮಳಿಂದ ಕಿತ್ತೂರು ಪ್ರಸಿದ್ಧವಾಗಿದೆ.ಇವಳು ಬೆಳಗಾವಿ ಜಿಲ್ಲೆಯ ಕಾಕತೀ ಎಂಬ ಊರಿನಲ್ಲಿ ೧೪ ನವ್ಹಂಬರ ೧೭೭೮ರಂದು ಜನಿಸಿದಳು.೨ ಪೆಬ್ರುವರಿ೧೮೨೯ರಂದು ತನ್ನ ೫೦ನೇ ವಯಸ್ಸಿನಲ್ಲಿ ಬೈಲಹೊಂಗಲದಲ್ಲಿ ಮರಣಹೊಂದಿದಳು.ಇವಳು ಪ್ರಥಮ ಭಾರತದ ಸ್ವಾತಂತ್ರ್ಯ ಮೊದಲ ಹೋರಾಟಗಾರರ್ತಿಯಾಗಿದ್ದಳು.ಈಕೆಯ ಸ್ವತಂತ್ರ್ಯ ಹೋರಾಟಕ್ಕೆ ನೀಡಿದ ಕೊಡುಗೆಯೆನೆಂದರೆ,ಕಿತ್ತೂರಿನ ಮೇಲೆ ಬ್ರಿಟಷರು ಮಾಡಬಹುದಾದ ಆಕ್ರಮಣವನ್ನು ತಪ್ಪಿಸಲು ಚನ್ನಮ್ಮ ಥ್ಯಾಕರೆಗೆ,ಮನ್ರೋನಿಗೆ ಹಾಗೂ ಚಾಪ್ಲಿನ್ನನಿಗೂ ಸಹ ಸಂಧಾನಕ್ಕಾಗಿ ಪತ್ರ ಬರೆದಿದ್ದಾಳೆ.ಆದರೆ ಬ್ರಿಟಿಷರು ಕಿತ್ತೂರಿನ ಒಡೆತನವನ್ನೇ ಆಪೇಕ್ಷಿಸಿದಾಗ ಚನ್ನಮ್ಮ ಮುಂದಾಲೋಚನೆಯಿಂದ ಕೊಲ್ಲಾಪುರ ಮೊದಲಾದ ನೆರೆಯ ಸಂಸ್ಥಾನಗಳ ಸಹಾಯ ಕೋರಿ ಪತ್ರ ವ್ಯವಹಾರ ಸಹ ಮಾಡಿದ್ದಾಳೆ.೨೧ ಅಕ್ಟೋಬರ ೧೮೨೪ರಂದು ಥ್ಯಾಕರೆ ಕಿತ್ತೂರಿಗೆ ಬಂದನು.ಮೂರನೆಯ ದಿನ ಅಂದರೆ ಅಕ್ಟೋಬರ ೨೩ರಂದು ಕೋಟೆಯ ಮೇಲೆ ತೋಪು ಹಾರಿಸಲು ತನ್ನ ಸೈನ್ಯಕ್ಕೆ ಅಪ್ಪಣೆ ಕೊಟ್ಟ.ಥಟ್ಟನೆ ತೆಗೆದ ಕೋಟೆಯ ಮೇಲೆ ಮುಗಿ ಬಿದ್ದರು ಚನ್ನಮ್ಮ ರಾಣಿಯ ಅಂಗರಕ್ಷಕ ಅಮಟೂರು ಬಾಳಪ್ಪ ಗುಂಡಿಗೆ ಥ್ಯಾಕರೆ ಬಲಿಯಾದ.ಸ್ಟೀವನ್ಸನ್ ಹಾಗೂ ಇಲಿಯಟ್ ಸೆರೆಯಾಳದರು.ದೇಶದ್ರೋಹಿಗಳಾದ ಕುನ್ನೂರು ವೀರಪ್ಪ,ಸರದಾರ ಮಲ್ಲಪ್ಪ ಅವರೂ ಬಲಿಯಾದರು.ಚನ್ನಮ್ಮನಿಗೆ ಹಾಗೂ ಬ್ರಿಟಿಷರಿಗೆ ಮತ್ತೆ ಪತ್ರ ವ್ಯವಹಾರ ನಡೆಯುತ್ತದೆ. ೧೮೨೪ ಡಿಸೆಂಬರ್೨ರಂದು ಸ್ಟೀವನ್ಸನ್ ಹಾಗೂ ಇಲಿಯಟ್ ಇವರ ಬಿಡುಗಡೆಯಾಗಿತ್ತದೆ.ಆದರೆ ಮಾತಿಗೆ ತಪ್ಪಿದ ಬ್ರಿಟಿಷರು ಡಿಸೆಂಬರ್ ೨ರಂದು ಅಪಾರ ಸೈನ್ಯದೊಂದಿಗೆ ಮುತ್ತಿಗೆ ಹಾಕಿ ಕೋಟೆಯನ್ನು ಒಡೆಯಲು ಪ್ರಾರಂಭಿಸುತ್ತಾರೆ.ಡಿಸೆಂಬರ್ ೪ರಂದು ಸರದಾರ ಗುರುಸಿದ್ದಪ್ಪ ಸೆರೆಯಾಳಾಗುತ್ತಾನೆ.ಡಿಸೆಂಬರ್ ೫ರಂದು ಚನ್ನಮ್ಮ ತನ್ನ ಸೊಸೆಯರಾದ ವೀರಮ್ಮ ಮತ್ತು ಜಾನಕಿಬಾಯಿಯರ ಜೊತೆಗೆ ಕೈದಿಯಾಗುತ್ತಾಳೆ.ಡಿಸೆಂಬರ್ ೧೨ರಂದು ಚನ್ನಮ್ಮ ಹಾಗೂ ವೀರಮ್ಮರನ್ನು,ಬೈಲಹೊಂಗಲಕ್ಕೆ ಕರೆದೊಯ್ಯಲಾಗುತ್ತದೆ.ಅಲ್ಲಿ ನಾಲ್ಕು ವರ್ಷಗಳವರೆಗೆ ಸೆರೆಯಾಳಾಗಿ ಉಳಿದ ಚನ್ನಮ್ಮ ೧೮೨೯ ಫೆಬ್ರುವರಿ ೨ರಂದು ನಿಧನ ಹೊಂದುತ್ತಾಳೆ.ರಾಣಿಯ ಸಹಾಯಕ್ಕೆ ನಿಂತ ಅನೇಕ ಕನ್ನಡ ವೀರರು ಹತರಾದರು.ಚನ್ನಮ್ಮನ ಸಮಾಧಿಯು ಕಲ್ಮಠದಲ್ಲಿ ಇದೆ.ಅಲ್ಲಿ ಸ್ವಾಮಿಗಳು ಒಂದು ಸ್ಮಾರಕವನ್ನು ಕಟ್ಟಿರುವರು.ಮತ್ತು ಆಗಿನ ಕಾಲಕ್ಕೆ ಸೊಲ್ಲಾಪುರದ ಸಬ್ ಕಲೆಕ್ಟರ್ ಸರ್ ಥಾಮಸ್ ಮನ್ರೋನ ಅಣ್ಣನ ಮಗನಾದ ಮಿಸ್ಟರ್ ಮನ್ರೋ ಎಂಬುವನು ಈ ಕಾಳಗದಲ್ಲಿ ಹತನಾದನು.

ಸಿಂಧೂರ ಲಕ್ಷಣನ ಸ್ವಾತಂತ್ರ್ಯಕ್ಕೆ ಕೊಟ್ಟ ಕೊಡುಗೆಯೆನೆಂದರೆ (೧೮೯೮–೧೯೨೨) ರವರೆಗೆ ಭಾರತದ ಕ್ರಾತಿಕಾರಿ ಭಾರತೀಯ ಸ್ವಾತಂತ್ರ್ಯ ಹೋರಾಟಗಾರರಾಗಿದ್ದು ಇವರು ಭಾರತದಲ್ಲಿ ಬ್ರಿಟಿಷ್ ವಸಹಾತು ಸರಕಾರಕ್ಕೆ ವಿರುದ್ಧವಾಗಿ ಹಿಂಸಾತ್ಮಕ ಸ್ವಾತಂತ್ರ್ಯ ಚಳುವಳಿಯಲ್ಲಿ ತೊಡಗಿದ್ದರು.ಇವರು ಈಗಿನ ಮಹಾರಾಷ್ಟ್ರದ ಸಾಗ್ಲಿ ಜಿಲ್ಲೆಯ ಜತ್ತ ತಾಲೂಕಿನ ಸಿಂದೂರ ಗ್ರಾಮದಲ್ಲಿ ಲಕ್ಷ್ಮಣನು ಸಾಬ್ಬಣ್ಣ ಮತ್ತು ನರಸವ್ವ ಎಂಬ ದಂಪತಿಗಳಿಗೆ ಜನಿಸಿದನು ಈ ದಂಪತಿಗಳ ಮೊದಲ ಸಾಕು ಮಗನ ಹೆಸರು ರಾಮ ಇದ್ದದುರಿಂದ ನಂತರ ಹುಟ್ಟಿದ ತಮ್ಮ ಸ್ವಂತ ಸಂತಾನಕ್ಕೆ ರಾಮನ ತಮ್ಮ ಲಕ್ಷ್ಮಣ ಎಂದು ಹೆಸರಿಟ್ಟಿರು. ಲಕ್ಷ್ಮಣನು ಬಾಲ್ಯದಲ್ಲಿಯೇ ಶೌರ್ಯ ಮತ್ತು ಸಾಹಸಕ್ಕೆ ಹೆಸರಾಗಿದ್ದನೆಂದು ಹೇಳಲಾಗುತ್ತದೆ.ತಂದೆಯ ಮರಣಾ ನಂತರ ಲಕ್ಷ್ಮಣನಿಗೆ ಸರಕಾರಿ ವಾಲೀಕಾರಿಕೆಯ ಕೆಲಸ ಒದಗಿ ಬಂದಿತು.ಅವನನ್ನು ಪ್ರತ್ಯಕ್ಷವಾಗಿ ನೋಡಿದವರು ಅವನೊಬ್ಬ ಅಜಾನುಬಾಹು,ಸ್ಪರದೂಪಿ ಸುಂದರಕಾಯದವನಾಗಿದ್ದನೆಂದು ಹೇಳಬಹುದು.ಅವನನ್ನು ಮಹಾಭಾರತದ ಭೀಮನಿಗೆ ಹೋಲಿಸಿ ಅವನು ೧೦ ಅಡಿ ಗೋಡೆಯನ್ನು ನೆಗೆಯುವ ಸಾಮರ್ಥ್ಯ ಹೊಂದಿದ್ದನೆಂದು ಬಣ್ಣಿಸುವರು.ಸದಾ ತಲೆಮರೆಸಿಕೊಂಡು ಇರುತ್ತಿದ್ದ ಲಕ್ಷ್ಮಣನಿಗೆ ಪೋಲಿಸರು ಬೆನ್ನತ್ತಿದಾಗ ಓಡುವ ಕುದುರೆಯನ್ನು ಅವನು ಹಿಮ್ಮೆಟ್ಟಿಸಿ ಹತ್ತುತ್ತಿದ್ದನೆಂದು ಹೇಳಲಾಗುತ್ತದೆ.೧೯೨೦ರ ಆಸುಪಾಸಿನಲ್ಲಿ ಭಾರತದಾದ್ಯಂತ ಅಸಹಕಾರ ಚಳುವಳಿ ಆವರಿಸಿದಾಗ ಲಕ್ಷ್ಮಣನು ತನ್ನದೇ ಆದ ರೀತಿಯಲ್ಲಿ ಸ್ವಾತಂತ್ರ್ಯ ಹೋರಾಟದಲ್ಲಿ ತೊಡಗಿದನು.೫೦ ಜನ ಸಮಾನ ಮನಸ್ಕರನ್ನು ಜೊತೆಗೂಡಿಸಿಕೊಂಡು ಒಂದು ಗುಂಪು ರಚಿಸಿ,ಆಂಗ್ಲ ಸರಕಾರವು ಶೇಖರಿಸಿದ್ದ ತೆರಿಗೆ ಹಣವನ್ನು ಖಜಾನೆಯಿಂದ ಲೂಟಿ ಮಾಡಲು ಪ್ರಾರಂಭಿಸಿದನು.ಲಕ್ಷ್ಮಣನು ಕೇವಲ ಆಂಗ್ಲರ ವಿರುದ್ಧವಷ್ಟೇ ಅಲ್ಲದೇ ನಿರ್ದಯಿ ಶ್ರೀಮಂತರ ಹಣವನ್ನು ತನ್ನ ಸುತ್ತ ಇರುವ ಬಡವರಿಗೆ ಹಂಚಿ ಸಹಾಯ ಮಾಡುತ್ತಿದ್ದನು.ಈ ರೀತಿ ಸಹಾಯ ಪಡೆದ

ಜನರೇ ಲಕ್ಷ್ಮಣನಿಗೆ ಅಡಗುದಾಣ ಮತ್ತು ಊಟದ ವ್ಯವಸ್ಥೆಯನ್ನು ಒದಗಿಸುತ್ತಿದ್ದರು.ಲಕ್ಷ್ಮಣ ನಿಜವಾಗಿಯೂ ಬಡವರ ಬಂಧುವಾಗಿದ್ದನು.ಆದರೆ ಅವನು ಆಂಗ್ಲ ಸರಕಾರಕ್ಕೆ ತಲೆ ನೋವಾಗಿದ್ದ ಕಾರಣ ಸರಕಾರ ಅವನ ವಿರುದ್ಧ ವಾರೆಂಟ್ ಹೊರಡಿಸಿತ್ತು.

ಈಗಿನ ಬಾಗಲಕೋಟೆ ಜಿಲ್ಲೆಯ ಬೀಳಗಿಯ ಹತ್ತಿರದ ತೆಗ್ಗಿಯ ವೆಂಕಪ್ಪಗೌಡರಿಗೂ ಮತ್ತು ಲಕ್ಷ್ಮಣನಿಗೂ ನಿಕಟವಾದ ಗೆಳತನವಿತ್ತು.ಲಕ್ಷ್ಮಣನಿಗೆ ಗೌಡರು ಸಹಾಯ ಮಾಡುವುದನ್ನು ಅರಿತ ಆಂಗ್ಲರು, ಗೌಡರಿಗೆ ಸಂದಿಗ್ಧತೆಯಲ್ಲಿ ಸಿಲುಕಿಸಿ ಲಕ್ಷ್ಮಣನನ್ನು ಸೆರೆ ಹಿಡಿಯುವ ಅಥವಾ ಕೊಲೆಗೈಯ್ಯುವ ಅನಿವರ್ಯ ಪರಿಸ್ಥಿಯನ್ನು ನಿರ್ಮಿಸಿದರು.ಲಕ್ಷ್ಮಣನ ಜೊತೆ ಹೋರಾಡಿ ಗೆಲ್ಲುವದು ಅಸಾಧ್ಯವೆಂದು ಅರಿತ ಗೌಡರ ವಾಲೀಕಾರರು,ಅವನನ್ನು ಹತ್ಯೆ ಮಾಡುವ ಸಂಚನ್ನು ರೂಪಿಸಿದರು.೧೯೨೨ರಲ್ಲಿ ಮಣ್ಣೆತ್ತಿನ ಅಮವಾಸ್ಯೆಯ ದಿನ ಲಕ್ಷ್ಮಣ ಮತ್ತು ಅವನ ಸಂಗಡಿಗರಿಗೆ ಔತನ ಬಿನ್ನಹ ನೀಡಿದರು.ಲಕ್ಷ್ಮಣನು ಊಟ ಮಾಡುವಾಗ ಮೊದಲೆ ಮರೆಯಲ್ಲಿ ಅವಿತು ಕೂತಿದ್ದ ಬಂಧುದಾರಿ,ಲಕ್ಷ್ಮಣನ ಮುಂದೆ ಕಂದೀಲಿನ ನಿಶಾನೆ ಮಾಡಿದ ತಕ್ಷಣ ಗುಂಡು ಹಾರಿಸಿದನು.ಮೋಸದಿಂದ ಗುಂಡು ತಾಗಿದುದರಿಂದ ವೀರ ಸಿಂಧೂರ ಲಕ್ಷ್ಮಣ ಹತನಾದನು.ತನ್ನ ತರುಣ ವಯಸ್ಸಿನಲ್ಲಿಯೇ ಹುತಾತ್ಮನಾದ ಲಕ್ಷ್ಮಣ ಜನರ ಮನದಲ್ಲಿ ಅಮರನಾದನು.ಸಿಂಧೂರ ಲಕ್ಷ್ಮಣನನ್ನು ಕರ್ನಾಟಕ ಮತ್ತು ಮಹಾರಾಷ್ಟ್ರದಲ್ಲಿ ಈಗಲೂ ಕೂಡಾ ಒಬ್ಬ ಜನಪ್ರಿಯ ನಾಯಕನಂತೆ ನೆನೆಯುತ್ತಾರೆ.ಸಿಂಧೂರ ಲಕ್ಷ್ಮಣನ ಕುರಿತು ನಾಟಕ ತುಂಬಾ ಪ್ರಚಲಿತದಲ್ಲಿದ್ದು ೧೯೭೭ರಲ್ಲಿ"ವೀರ ಸಿಂಧೂರ ಲಕ್ಷ್ಮಣ " ಎನ್ನುವ ಕನ್ನಡ ಚಲನಚಿತ್ರ ಕೂಡ ನಿರ್ಮಿಸಲಾಯಿತು.

ಊಟ ಬಡಿಸಿಉಣಿಸಿ। ಎಲ್ಲಾ ಮಂದಿ ಕಳುವ್ಯಾನು।
ನಾಯಕ ಅಲ್ಲೊಬ್ಬ ಉಳಿದ।ಲಾಟೀನ ತಗದ ಲಕ್ಷ್ಮಣನ ಕರದು।
ಕೈಯಾಗ ಕೊಟ್ಟಾನು। ಮೊದಲ ಸೂಚನೆ ಇತ್ತು।
ವಾಲಿಕಾರ ಸ್ವಾಮಣ್ಣ ಹೊಡೆದನು। ಪಕ್ಕೆಯಾಗ ಗುಂಡಾ ಬಡಿತಲ್ಲಾ।
ಆತು ಒಳ್ಳೇ ಕೇಡಾ। ನಾಯಕ ಓಡಿ ಹೋದಾ।
ಲಕ್ಷ್ಮಣ ಬಿದ್ದಾನು।
ಮೋಸ ಮಾಡಿ ಹೊಡದಂಗಾಯ್ತು।
ಅಭಿಮನ್ಯುವಿಗೆ ಕೌರವನು। ॥ಗೀ॥

ಈ ಮೇಲಿನ ಲಾವಣಿಗಳಲ್ಲಿ ಹೇಳುವಂತೆ ಲಕ್ಷ್ಮಣನನ್ನು ಕುರಿ ಕೋಳಿ ಸೆರೆ ಕೊಟ್ಟು ಊಟ ಮಾಡಿಸಿ ಮೋಸದಿಂದ ಹೊಡೆದು ಗುಂಡಿಕ್ಕಿ ಕೊಲೆ ಮಾಡುತ್ತಾರೆ.ಆಗ ಲಕ್ಷ್ಮಣ ಸ್ವಾತಂತ್ರ್ಯಕ್ಕಾಗಿ ವೀರಮರಣವನ್ನಪ್ಪುತ್ತಾನೆ.ನಂತರ ಪೋಲಿಸರು ಮರುದಿನ ಬಂದು ಶವವನ್ನು ಬೀಳಗಿಗೆ ತೆಗೆದುಕೊಂಡು ಹೋಗಿ ಅಂತ್ಯಕ್ರಿಯೆ ಮಾಡುತ್ತಾರೆ.ಅಲ್ಲಿ ಸರಕಾರಿ ಸಾಹೇಬರು ಹಾಲು ಕುಡಿದು ಸಂತೋಷಗೊಳ್ಳುತ್ತಾರೆ.ಇದೊಂದು ದುಖ:ಕರ ಸಂಗತಿಯಾಗಿದೆ.ಮತ್ತು ಕೇವಲ ಹುಟ್ಟಿ ೨೪ ವರ್ಷ ವಯಸ್ಸಿನಲ್ಲೇ ಸ್ವಾತಂತ್ರ್ಯ ಹೋರಾಟ ಮಾಡಿ ಭಾರತಕ್ಕೆ ಕೊಡುಗೆಯನ್ನು ಕೊಟ್ಟ ಮಹಾನ್ ಚೇತನ ಶಕ್ತಿಯೆಂದರೆ ಅದು ಸಿಂಧೂರ ಲಕ್ಷ್ಮಣನಾಗಿದ್ದಾನೆ.

ಬಿಡುಗಡೆ ಬಂತೆ ಈ ದೇಶಕ್ಕೇ ಬಿಡುಗಡೆಡಯ ಕೆಚ್ಚು
ನೂರಕ್ಕೆ ಐದರಷ್ಟಾದರೂ ಇದೆಯೆ ನಮ್ಮಲ್ಲಿ
ನಮಗೂ ಅಂತರಾಷ್ಟ್ರೀಯ ರೋಗ.ಇದರ ಲಕ್ಷ್ಮಣ–ಇಲ್ಲಿನದು
ಏನೂದಕ್ಕುವುದಿಲ್ಲ
ನಮ್ಮ ಹೆಂಗಸರನ್ನು ಸೌಂದರ್ಯ ಸ್ಪರ್ಧೆಗೆ
ಕಳಿಸಿ,ನ್ಯಾಯಾರ್ಕಿನಲ್ಲಿ ನ್ಯಾಯ ಮೂರ್ತಿಗಳೆದರು
ಅರಬತ್ತಲೆಯಲ್ಲಿ ನಿಲ್ಲಿಸಲು ಹಿಂಜರಿವ
ಆನರಲ್ಲ ನಾವು,ಶುದ್ಧ ಗಲಾಮರು.
[ಗುಲಾಮರು ಲಾವಣಿಯಿಂದ–ಜಿ.ಎಸ್.ಶಿವರುದ್ರಪ್ಪ]

ಅಶೋಕ ಚಕ್ರದ ಅರ್ಥಗರ್ಭಿತ ಸಂದೇಶ–ಸಿಂಹ ಹೃದಯಿಗಳಿಗೆ ಸಿಂಹದ ರಾಷ್ಟ್ರಮುದ್ರೆ ಭಾರತದ ರಾಷ್ಟ್ರಧ್ವಜ ಮತ್ತು ರಾಷ್ಟ್ರಮುದ್ರೆಯ ಸ್ವರೂಪವನ್ನು ಸಾಮ್ರಾಟ್ ಅಶೋಕನ ಕಾಲದ ಸಾಂಚಿ ಸ್ತೂಪದಿಂದ ಸ್ಫೂರ್ತಿಯನ್ನು ಪಡೆದಿದೆ.ರಾಷ್ಟ್ರಧ್ವಜದ ಕೇಸರಿ ಬಿಳಿ ಹಸುರು ಬಣ್ಣದ ಪಟ್ಟಗಳು ಈಗಿನ ತ್ರಿವರ್ಣ ಧ್ವಜದಲ್ಲಿ ಇದ್ದಂತೆಯೇ ಉಳಿದು ಅದರ ಮೇಲೆ ರಾಟೆಯ ಬದಲು ಸಾಂಚಿ ಸ್ತೂಪದ ಮೇಲೆ ಅಂದವಾಗಿ ಕೆತ್ತಲ್ಪಟ್ಟ ಚಕ್ರವು ದಟ್ಟ ನೀಲಿ ಬಣ್ಣದಲ್ಲಿ ಕಂಗೋಳಿಸುವುದು ಒಂದೇ ರೂಪದಲ್ಲಿ ಕಾಣುವುದಿಲ್ಲವೆಂದು ಈ ಬದಲಾವಣೆ ಮಾಡಲಾಗಿದೆ.ಇದಕ್ಕೆ ಉದಾಹರಣೆಯಾಗಿ ಕಯ್ಯಾರಕಿಞ್ಞಣ್ಣರೈರವರ ಪದ್ಯ ಈ ಕೆಳಗಿನಂತೆ ಇದೆ.

ಕೇಸರಿ ಬಿಳಿ ಹಸುರು ಮೂರು
ಬಣ್ಣ ನಡುವೆ ಚಕ್ರವು
ಸತ್ಯಶಾಂತಿ ತ್ಯಾಗ ಮೂರ್ತಿ
ಗಾಂಧಿ ಹಿಡಿದ ಚರಕವು

ಚಕ್ರವೆಂದರೆ ಯಾಂತ್ರಿಕ ಮತ್ತು ಔದ್ಯೋಗಿಕ ಅಭಿವೃದ್ಧಿ ಎಂದು ಆಧುನಿಕ ಸಂಕೇತ.ಇದು ಮನುಷ್ಯನ ಕಾಲ ಮತ್ತು ಅಂತರಂಗಗಳನ್ನು ಜಯಿಸಲು ಎಂಜಿನ್,ಮೋಟಾರ್,ವಿಮಾನಗಳನ್ನು ಕಂಡು ಹಿಡಿದ ಸಾಹಸದ ದ್ಯೋತಕವಾಗಿದೆ.ಚಕ್ರದ ಈ ಸರ್ವ ಸಂಕೇತಗಳನ್ನು ಗಮನಿಸಿದರೆ ರಾಷ್ಟ್ರದಲ್ಲಿ ಚಕ್ರವಿರಬೇಕು ಎಂದು ಸೂಚಿಸಿದರ ಬುದ್ಧಿ ಮತ್ತೆಯನ್ನು ಕಂಡುಹಿಡಿಯಲಾಗದು.ಈ ಚಕ್ರದ ಹಲ್ಲುಗಳು ಆಕಾರದಲ್ಲಿ ಸೂರ್ಯನನ್ನು, ಆಯುರಾರೋಗ್ಯ, ಬೆಳೆ,ಬೆಳಕು ಮತ್ತು ಸರ್ವಸದ್ವತ್ತುಗಳ ಪ್ರಧಾನವೆಂದು ಶತಶತಮಾನಗಳಿಂದಲೂ ಆರಾಧಿಸಲಾಗುತ್ತದೆ.ಇದಕ್ಕಿಂತ ಉತ್ತಮವಾದ ಚಿಹ್ನೆಯು ಯಾವ ರಾಷ್ಟ್ರ ಧ್ವಜದಲ್ಲಿಯೂ ಇಲ್ಲವೆಂದು ಹೇಳಬಹುದು.ಭಾರತೀಯರು ಈ ಧ್ವಜದ ಮಹತ್ವವನ್ನರಿತು ಅವರ ಗೌರವಕ್ಕೆ ತಕ್ಕಂತೆ ಬಾಳಬೇಕು.ನಮ್ಮ ಈ ಕೃತಿಗಳಿಂದಲೇ ನಾವು ನಮ್ಮ ರಾಷ್ಟ್ರಧ್ವಜವನ್ನು ಇಡೀ ಜಗತ್ತು ಗೌರವಿಸುವಂತೆ ಮಾಡಬೇಕು.

ಗ್ರಂಥ ಋಣ

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೪. ಸಾಹಿತ್ಯ–ಕಯ್ಯಾರಕಿಞ್ಞಣ್ಣರೈ
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ಪರಾಮರ್ಶನ

೧. ವೀರ ಮಹಿಳೆ ಕಿತ್ತೂರು ಚನ್ನಮ್ಮ–ಸಂಪದ ಲೇಖನ
೨. ನಮ್ಮ ನಾಡು,ನಮ್ಮ ಹೆಮ್ಮೆಯ ವೀರ ಮಹಿಳೆಯರು
೩. ಸ್ವಾತಂತ್ರ್ಯದ ಕಿಡಿ ಹೊತ್ತಿಸಿದ ಕನ್ನಡದ ರಾಣಿ ಕಿತ್ತೂರು ಚನ್ನಮ್ಮ
೪. ಕೋಮು ಸೌಹಾರ್ದತೆ ಮೆರೆದ ಕಿತ್ತೂರು ಚನ್ನಮ್ಮ

೫. ಕಿತ್ತೂರು ಚನ್ನಮ್ಮ

ಅಡಿ ಟಿಪ್ಪಣಿ

೧. ಲಾವಣಿ ಪದಗಳು– ಪು.ಸಂ–೫೫೮

೨. ಜನಪದ ನೆಲೆ ನಿಲವು–ಪು.ಸಂ–೯೫,೯೬

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International Journal of IT & Knowledge Management (ISSN: 0973-4414)
Volume 14 • Issue 1 pp. 38-40 June 2020 - Dec 2020 www.csjournals.com

Quest on Studies in History

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Abstract: A few years back there was a popular terminology among the people that "History is a mother of all Social Science", because History guides all not to make repetitive mistakes. It gives all the information and helps to prepare the plans and programmes. It is a treasure house of all knowledge which prevents all the dangers and damages that occur in the society. But at present these statements have become unpopular, useless and some extent baseless.

Introduction:

The study of History has slowly become deteriorated [decline position] due to the circumstances such as: The prescribed syllabus of High School level History is not upto the mark. The subject matters are not co-related with each other. In Pre-University level the introduction of syllabus is not proper. It consists of good number of units and subtopics but without clarity. Also number of elementary topics are ignored. Learning of history is not at all interesting nowadays because in comparison with the knowledge of student, the teacher is lagged behind in satisfying the knowledge thirst of students.

The Prescribed syllabus of Degree and Post-graduate level are more or less the same which was decades ago. As per the survey, majority of the student community has disliked history because there is no newness in history. It is difficult to remember the dates and facts. It includes only dynastic rule. Etc.,

Position of History Department in Higher Education:

At present History subject divided into many branches like Ancient, Medieval, Modern Indian, Local History, Regional History, World History, Asian History, History of Europe etc… Also, the Universities have followed their own systems is the framing syllabus in University and college Level teaching. The shorthand (Shortcut) methods of learning in History is not at all fruitful to the students Though History subject is so easy but the students find difficulty in giving answer to the given questions. In other context, our Indian Students instead of offering Indian History, they offer foreign history to gain good marks which is fruitless. Number of researches have been taken place and their results are published (declared) but our board of studies is not interested to including these new findings in syllabus. No doubt if the same trend is continued for another 5-6 years History subject may disappear from the core subjects.

How to make History subject as an interesting subject:

(I) The measures can be taken to change syllabus, History which is in theory should be converted is to practical form.
(II) Repetition of topics should be deleted in class wise syllabus from High School to College level.
(III) Syllabus should consists of recent researches and development which may be helpful to the younger generation to upgrade their knowledge.

(IV) It is necessary to convert History subject as an income generative subject. As a commercial product History may become one of the in interesting and attractive subject. For example History and Tourism Subjects are co-related. There are Five sub components of Tourism which are interrelated to the department of History.
They are

(I) Historical Tourism
(II) Pilgrimage Tourism
(III) Study Tourism *-I) Study of Culture*
II) Study of Art and Architecture
II) Geographical History
IV) Nature History and others.

Adopting the tourism as a part of the History subject may give boon and boom to the development of History and Tourism and also helps for the economic sufficiency. It also creates more job opportunities. So it is necessary to start Department of Indian History and Tourism in the place History and Archaeology or Epigraphy or other Foreign History in each and every colleges. The revised syllabus is to be introduced in the place of political history.

The main components of this new syllabus are:

(I) Cultural History with reference to the cultural contributions of a few important rulers.
(II) History of Arts (I) Sculptural Arts (II) Study of monuments paintings
(III) Project Works, Hotel Management Home stay facility Tourist guide, Tiketing, Photography, Management of transportation, Networking, Performing arts like Dance Music and many more.

How the implementation is possible:

The Department of Indian History and Tourism of all colleges must be attached or collaborated with NGO's, Government departments, and some autonomous bodies to help in all respect. The course should be based on the concept of practical fieldwork oriented, project works and earn and learn principles. Instead of conducting 3 or 5 years degree course the Government can conduct the short term diploma on certificate courses of six months duration. If the students are not interested to continue the degree they can discontinue the course in the middle by obtaining the certificates so the student can utilize (use) his knowledge and time for his day today livelihood by starting his own business. At the end of the course others can be awarded with degree. History students those who are interested in the preparation of competitive exams are to be given coaching in the different branches of the history. In this regard the universities and Government has to take interest to train the teaching community by conducting camps and workshops.

Conclusion:

If this method is implemented, in approximate 40% to 50% youth may get employment in the different fields as tourist guides, ticketing hotel management business etc. The rural resources will be utilized also. This study will focus on rural cottage industries unidentified historical sites etc. The Project oriented studies give recent facts and figures so it helps the government to plan for the developmental projects, Besides, this saves the huge amount of money and time of the government. It is also helpful to attract and the foreign tourists, If all these information are consolidated in book or in website the foreign exchange will be increased. If

the implementation of this combination takes little time it may helpful to the revival of department of History, life style of the people.

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International Journal of IT & Knowledge Management (ISSN: 0973-4414)
Volume 14 • Issue 1 pp. 26-33 June 2020 - Dec 2020 www.csjournals.com

Information Resources for Academic Development in Modern Scenario

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Abstract: The progress in Information Technology and the emergence of Internet and its WWW has given a new face-lift to the information systems. The library collections with the tradition of its holdings are now added with the electronic information resources in various formats. The popularity and ease in use of WWW has lured most of the reputed publishers to host their products on Web. In this changing information environment, the role of information professionals is becoming crucial and challenging. It is becoming important to introduce users to maximum and optimum utilization of electronic information resources. In this paper, the authors have highlighted the need and importance of user instruction services and suggested user instruction programmes for better utilization of electronic information resources.
Keywords: Information Sources, Internet, E-Sources, Database, Library.

1. INTRODUCTION

Advances in Information Technology have brought about many changes in libraries. Informational professionals have to switch over to new methods and techniques for handling information. In this context the role of information professionals is becoming very challenging. Library collections are growing multifold and electronic information resources are becoming vague. Almost entire gamut of primary, secondary and tertiary information resources hitherto embodied in print format are now available in the form of electronic databases.
The Internet and its World Wide Web (WWW) have provided a platform to access information from remote databases. As a result, information resources available on web are increasing. In this changing scenario of handling information, the role of information professional is very crucial, as he has to act as a bridge between information and its end users. Information professionals have to coordinate and manage the task of introducing the users to electronic information resources.

- For the centuries the societies in their various stages of developments have prospered on the bases of information and knowledge,
- Though, the growth of new knowledge has been slow, incidental and sporadic in the beginning but in later years, information has reckoned as a driving force for all human developments,
- It is increasingly realized and recognized that information and knowledge and their application for transformation of non-resources into value added economic resources are the real driving power for human material progress,
- Information is an essential ingredient in decision making and useful in our daily lives,

- The assessment has resulted in the creation of institutions exclusively for Research and Development (R & D) activities,
- The output of these R & D activities has been the generation of new information and knowledge,
- Timely up-to-date, relevant and quality information is vital for academic purposes and for academic development too.

2. INFORMATION FOR ACADEMIC ACTIVITIES

- For Teaching
- For Research
- For Publication

WHAT ARE INFORMATION SOURCES?

Information sources are the various means by which information is recorded for use by individual or organization, These are means by which a person is informed about something or knowledge is provided or share with someone, a group of people or an organization, Information sources could be observations, people, organizations, speeches, documents, pictures, artwork, etc.,

- Information sources could be in print or non-print formats.

3. TYPES OF INFORMATION SOURCES

SOURCES OF INFORMATION

1. Documentary
a) Primary Sources
b) Secondary Sources
c) Tertiary Sources

2. Non-Documentary
a) Formal Sources
b) Informal Source

1. Documentary Sources,

There are referred to the published and unpublished sources of the print media in all fields of knowledge. They may be textual, numeric or graphic, in any physical form in any language, produced within the country or outside. They are further divided in to:

a) Primary Sources

b) Secondary Sources

c) Tertiary Sources

a) PRIMARY SOURCES OF INFORMATION

A primary source is a document or physical object which was written or created during the time under study. These sources were present during an experience or time period and offer an inside view of a particular event. Some types of primary sources include: Periodicals, Research Reports, and Reports on Scientific expedition, Conference Proceedings, Standards and Patents. Diaries, interviews, minutes of meetings, photographs, videos, artworks, artifacts, Theses and Dissertations and also unpublished sources of information like company files, laboratory Notebooks etc.

b) SECONDARY SOURCES OF INFORMATION

A secondary source interprets and analyzes primary sources. These sources are one or more steps removed from the event. Secondary sources may have pictures, quotes or graphics of primary sources in them. Some types of secondary sources include: Reference books, Reviews, Indexing and abstracting periodicals, Yearbooks, journal/magazine Almanacs, Handbooks etc.

c) TERTIARY SOURCES OF INFORMATION

Tertiary sources provide overviews of topics by synthesizing information gathered from other resources. Tertiary resources often provide data in a convenient form or provide information with context by which to interpret it. The distinctions between primary, secondary, and tertiary sources can be ambiguous. An individual document may be a primary source in one context and a secondary source in another. Encyclopedias are typically considered tertiary sources, but a study of how encyclopedias have changed on the Internet would use them as primary sources. Time is a defining element. Examples almanacs, directories, population registers/statistics, fact books, abstracts, indexes, bibliography of bibliographies, chronologies, classifications, handbooks, guide books and manuals, Guide to literature etc.

2. NON DOCUMENTARY SOURCES

a) Formal Sources

b) Informal sources

a) FORMAL SORUCES INCLUDE

- Research organizations
- Societies
- Industries
- Government developments

- Universities
- Consultants etc.

b) INFORMAL DOCUMENTS ARE LIVE SOURCES INCLUDES

- Conversation with colleagues,
- Conversation with visitors,
- Attendance at professional meetings etc.

FORMATS OF INFORMATION SOURCES

Information is of great diversity and in various formats.

The two main formats are:

Print

Books, periodicals, bibliographies, maps, indexes and abstracts, photographs, government documents, technical reports, etc are the print resources apart from theses there are many other print resources.

Non –print

Audio visual, Multimedia, microform and electronic books and journals, images, texts/records from the internet, Web documents, etc are the important non-print materials.

"SOME PUPULAR REFERENCE SOURCES"
Louis Shores categorizes these questions and sources of information as follows

Sl. No.	Class of Question	Sample Types	Representative Sources
1	Language	Definition, spelling, abbreviation, symbols, foreign terms, usage	Dictionary
2	Background	"Something about," general information, self-education	Encyclopedia
3	Trend	Current events, past year's developments, recent happenings	Yearbook, Serial
4	People	Notables, specialists, socialities, others	Biographical Dictionary
5	Places	Locations, descriptions, distances	Gazetteer, Atlas
6	Organisations	Addresses, purposes	Directory

7	Facts	Curiosities, statistics, events, formulas, allusions	Handbook
8	Bibliography	Reviews, best books, subject literature	National Trade Subject Bibliography
9	Activities	"How to do", "How to make"	Manual
10	Illustrations pictures	Cartoons, slides, films, recordings	Audio-Visual Materials

WHERE TO FIND INFORMATION SOURCES

1. **Electronic Information Resources.**
2. **Instruction Services for the use of Electronic Information Resources.**
3. **Planning of a User Instruction Programme.**
4. **HUMAN SOURCES**

1.1 CD-ROM databases

CD-ROM databases are increasing day by day in almost all fields due to their many advantages in information storage and retrieval. Majority of publishers of books and journals, on-line vendors and various learned societies are bringing out new titles in CD format with powerful, user- friendly retrieval software. Electronic information resources in CD format include abstracting and indexing services, encyclopedias, dictionaries, directories, yearbooks, back volumes, patents, standards and many other reference works. The CD-ROM technology has given ample opportunities for information professionals to introduce more information services to end-users.

1.2 DVD-ROM databases

The advent of DVD- Digital Video Disc or Digital Versatile Disc, with its 17 GB of high data storage capacity, has made it possible to include more multimedia elements like video and sound and to integrate many reference sources on a single disc. "The other features like higher quality of sound and video, higher rate of data transfer, data security etc., are making DVD more viable option than CD-ROM. Some DVD reference sources include Britannica DVD 99, Webster's International DVD Encyclopedia-2000, Grolier Multimedia Encyclopedia, Eyewitness World Atlas DVD-ROM Deluxe Edition, and The Complete National Geographic on DVDROM etc.

1.3 Online Databases

The recent growth of Internet and the popularity and ease in use of Web are making libraries to subscribe to online information services. The online database services like Dialog (KR Information) and STN are now moving towards being web centric. The usage of online databases against their CD-ROM counterparts has to be evaluated and decided on the basis of cost

effectiveness and timeliness. Few Online information services are KR Science Base and STN. The KRScienceBase, which includes information sources like BIOSIS, CA Search, Elsevier Science Publishers, Reuters, NTIS etc. Chemical Abstract Service, producer of the world's largest and most comprehensive database of chemical information, offers several databases on STN like
CAplus, INSPEC, MEDLINE, SCISEARCH, TOXLIT etc are some online databases.

1.4 E-journals

E-journals or Electronic Journals are gaining more importance with the emergence of Internet. "Most of the publishers are choosing WEB as a an access medium using HTML to mark up the journal content so that it can be read using a web browser. These are also called as networked E-journals. Other publishers have chosen to use additional access software in conjunction with the WEB, the most popular being Adobe Acrobat and its associated Portable Document Format (PDF) file type".

1.5 INTERNET as an Electronic Information Resource

The INTERNET and its World Wide Web (WWW) have given a paradigm shift to information management. The information available on net is increasing rapidly and the task of providing relevant information to patrons is gaining paramount importance in all types of libraries. Most of the reputed publishers, learned and commercial societies are hosting their products on net and also all libraries are sharing their internal and external information resources by means of web pages and Web-OPACs. The powerful search engines over net are aiding the information location quite efficiently. The Internet services like E-mail, Bulletin Boards, Newsgroups, Discussion Lists, etc are gaining importance in libraries and are becoming indispensable resources for the users. Due to impact of Internet, there is a swift migratio n from offline to online, as Web is becoming a popular user interface for providing access to remote and frequently updated resources.

2. Instruction Services for the use of Electronic Information Resources.

The money and efforts involved in the procurement of electronic information resources are going in vain due to their under utilisation. The reasons may be attributed to lack of awareness among users and intermediaries, training and orientation and less interest on part of information facilitators. "Despite tremendous publicity and excited curiosity about Information Technology in general and electronic information in particular, substantial under utilization of imported IT products, services, tools and means can be seen everywhere. One of the important reasons for under utilisation of electronic information is lack of requisite level of working knowledge and consumption skills among users and information intermediaries"3. User education or instruction in most of the libraries has lost its credibility, as there are no definite user orientation programmes except providing a copy of rules and regulations of the library. There is a pressing need for methodological approach towards instructing the users for maximum and optimum utilisation of electronic information resources.

3. Planning of a User Instruction Programme

There should be proper planning and definite programmes for the introduction of electronic information resources to users. The programmes must be intended to assist information professionals who provide and publicise new electronic information resources to users. With increasing influx of electronic information to libraries, the user orientation programmes must be implemented specifically to electronic information resources. There must be proper set guidelines for information service providers, who coordinate and manage the introduction of new electronic information resources and these guidelines must offer practical guidance to library staff who are concerned with strategies for implementation, policy, procedure, education and or direct provision of electronic information services.

4. HUMAN SOURCES

Human sorces are the most valid form of tacit knowledge Communication with peers colleagues are a good way of obtaining that vital knowledge/information,

For example, doctors have been found to rely on their colleagues for information in order to solve a patient's problems, Informal sources of information are valuable and are readily available, If the right person in contacted, quality and up-to date information will be obtained, There may be some elements of bias in the information provided by human sources, Individuals may say provide information from their own point of view or exaggerate it.

ARCHIVES

- Archives are places where records of all types and formats are kept and made accessible for research and other purposes,
- Archives store, preserve and make accessible records of enduring value, unique and usually one of its kind items,
- They are good place to find both published and unpublished primary sources,
- Personal and institutional records of all types can be found in archives, as well as media, ephemera, oral histories, and even artifacts,
- Archival materials are rare and irreplaceable as a result they are not on loan.

LIBRARIES

- Libraries collect quality information in a wide variety of formats,
- Librarians select books, journals, magazines, databases, CDs, DVDs, government reports for use by their patrons,
- This selection process enables libraries to collect resources considered to be reliable, relevant and valuable,
- Library materials unlike those found on the internet go through a review process,

- Libraries provide access to reference resources, books, periodicals and other materials in both print and electronic formats for use by the patrons,
- Some libraries specialize in information materials like rare books, maps, unpublished manuscripts and other special collections,
- Some library materials can be loaned to users.

INTERNET

The Internet is a network of computer networks around the world that enable people to access information and to communicate with each other, The World Wide Web (www) provides the technology needed to navigate the resources on the Internet, No innovation in history has so profoundly changed our lives as the Internet (Blonde, Cook and Dye, 1999). The important internet information resource includes: E Resources, E-Documents, E-Books, E-Journals, E-Journals

CONCLUSION

The dramatic and swift changes in information management have given a new face- lift to most of the libraries. The users, who form the integral part of information system, have to be given due importance in achieving the pinnacle of success. New strategies and vistas have to be explored from time to time for user education and instruction programmes. A methodological approach for better and optimum use of electronic information resources must be adopted.

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International Journal of Electronics Engineering (ISSN: 0973-7383)
Volume 12 • Issue 2 pp. 16-20 June - Dec 2020 www.csjournals.com

Digital Circuits: A Study on Logical Gates

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Abstract: The Digital electronic circuits operate with voltages of **two logic levels** known as Logic Low and Logic High. The voltages of Logic Low are represented with '0' & Similarly, The voltages of Logic High are represented with '1'. These digital electronic circuits have one or more inputs with the single output known as ***Logic gate***. They are the building blocks of any digital system.

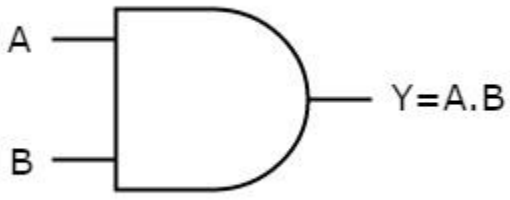
Introduction

The Boolean functions can be represented either in the form of sum of products or in the form of product of sums form based on the user requirement. The basic gates are AND, OR & NOT gates.

AND gate
The AND gate is a digital circuit which has two or more inputs and produce an output, which is known the **Logical AND** of all the inputs and they are represented with the symbol **'.'**.
The following **truth table** shows the 2-input AND gate.

A	B	Y = A.B
0	0	0
0	1	0
1	0	0
1	1	1

Here the A, B are the inputs and Y is the output of 2 input AND gate. If both inputs are '1', then only the output, Y is '1'. For remaining combinations of inputs, the output, Y is '0'.
The following figure shows the **symbol** of an AND gate, which is having two inputs A, B and one output, Y.



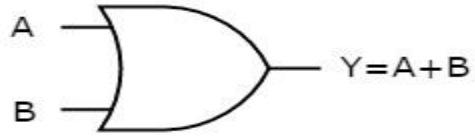
This AND gate produces an output *Y*, which is the **logical AND** of two inputs A, B. Similarly, if there are 'n' inputs, then the AND gate produces an output, which is the **logical AND** of all those inputs. This means, the output of AND gate will be '1', when all the inputs are '1'.
OR gate An OR gate is a digital circuit that has two or more inputs thus producing an output, which is the **logical OR** of all those inputs. This **logical OR** is represented with the symbol **'+'**.

International Journal of Electronics Engineering (ISSN: 0973-7383)
Volume 12 • Issue 2 pp. 16-20 June - Dec 2020 www.csjournals.com

The following table shows the **truth table** of 2-input OR gate.

A	**B**	**Y = A + B**
0	0	0
0	1	1
1	0	1
1	1	1

Here A, B are the inputs and Y is the output of two input **OR gate**. If both inputs are '0', then only the output, Y is '0'. For remaining combinations of inputs, the output, Y is '1'.
The following figure shows the **symbol** of an OR gate, which is having two inputs A, B and one output, Y.



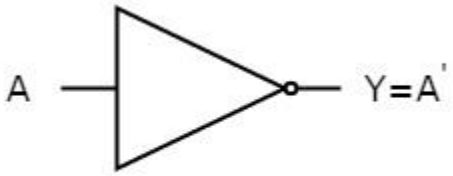
This **OR gate** produces an output known as 'Y', which is the **logical OR** of the two inputs A & B. Similarly, if there are 'n' inputs, then the OR gate produces an output, which is the logical OR of all those inputs which means, the output of an OR gate will be '1', when in least possible case one of those inputs is '1'.

NOT gate

A **NOT gate** is a digital circuit that has single input and single output. The output of **NOT gate** is the **logical inversion** of input. Hence, the NOT gate is also called as inverter.
The following table shows the **truth table** of NOT gate.

A	**Y = A'**
0	1
1	0

Here A and Y are the input and output of NOT gate respectively. If the input, A is '0', then, the output, Y is '1'. Similarly, if the input, A is '1', then the output, Y is '0'.
The following figure shows the symbol of **NOT gate**, which is having one input A and one output Y.



This **NOT** gate produces an output *Y* , which is the **complement** of input, A.

Universal gates

The NAND & The NOR gates are called as **universal gates**. As they help the user in implementing any Boolean function, which is in sum of products format by using NAND gates alone. Similarly, we can implement any Boolean function, which is in product of sums format by using NOR gates alone.

International Journal of Electronics Engineering (ISSN: 0973-7383)
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NAND gate

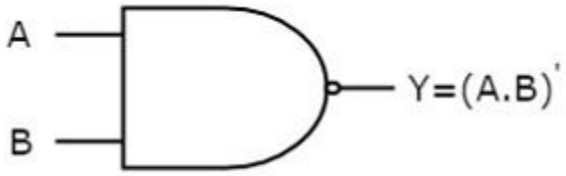
NAND gate is a digital circuit that has two or more inputs and produces an output which is the inversion of **logical AND** of all those inputs.

The following table shows the **truth table** of 2-input NAND gate.

A	**B**	**Y = *A.B***
,		
0	0	1
0	1	1
1	0	1
1	1	0

Here A and B are the inputs and Y is the output of two input NAND gate. When both inputs are '1' the output Y is '0'. If at least one of the input is zero, then the output Y is '1'. This is just opposite to that of two input **AND** gate operation.

The following image shows the **symbol** of NAND gate, which is having two inputs A and B and one output ie Y.



NAND gate operation is same as that of AND gate followed by an inverter. That's why the NAND gate symbol is represented like that.

NOR gate

NOR gate is a digital circuit that has two or more inputs and produces an output, which is the inversion of **logical OR** of all those inputs.

The following table shows the **truth table** of 2-input NOR gate

A	**B**	**Y = *A*+*B***
,		
0	0	1
0	1	0
1	0	0
1	1	0

Here A and B are the inputs and Y is the output. If both inputs are '0', then the output, Y is '1'. If at least one of the input is '1', then the output, Y is '0'. This is just opposite to that of two input OR gate operation.

The following figure shows the **symbol** of NOR gate, which is having two inputs A and B and one output, Y.

International Journal of Electronics Engineering (ISSN: 0973-7383)
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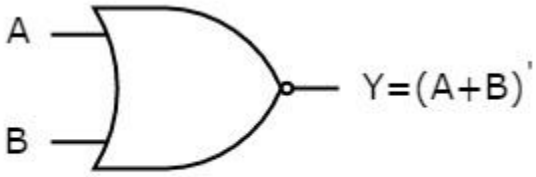


NOR gate operation is same as that of OR gate followed by an inverter. That's why the NOR gate symbol is represented like that.

Special Gates

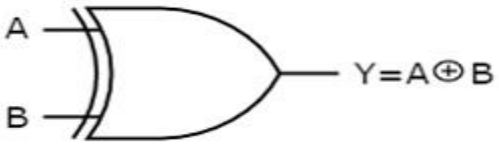
Ex-OR & Ex-NOR gates are called as special gates. As these two gates are special cases of OR & NOR gates.

Ex-OR gate

The full form of Ex-OR gate is **Exclusive-OR** gate. Its function is same as that of OR gate except for some cases, when the inputs having even number of ones.
The following table shows the **truth table** of 2-input Ex-OR gate.

A	**B**	**Y = A⊕B**
0	0	0
0	1	1
1	0	1
1	1	0

Here A & B are the inputs and Y is the output of two input Ex-OR gate. The truth table of Ex-OR gate is same as that of OR gate for first three rows. The only modification is in the fourth row. Which says the output *Y* is zero instead of one, when both the inputs are one as the inputs having even number of ones. Therefore the output of Ex-OR gate is '1' when only one of the two inputs is '1'. And it is zero, when both inputs are same.
Below figure shows the **symbol** of Ex-OR gate, which is having two inputs A, B and one output, Y.



Ex-OR gate operation is similar to that of OR gate except for a few combinations of inputs & that's why the Ex-OR gate symbol is represented like that. The output of Ex-OR gate is '1' when the odd number of ones present at the inputs. Hence, the output of Ex-OR gate is also called as an **odd function**.

Ex-NOR gate

The full form of Ex-NOR gate is **Exclusive-NOR** gate. Its function is same as that of NOR gate except for certain cases when the inputs having even number of ones. The following table shows the **truth table** of 2-input Ex-NOR gate.

International Journal of Electronics Engineering (ISSN: 0973-7383)
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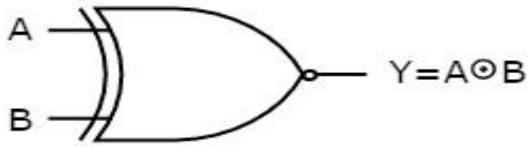
A	B	Y = A⊙B
0	0	1
0	1	0
1	0	0
1	1	1

Here A and B are the inputs and Y is the output. The truth table of Ex-NOR gate is same as that of NOR gate for first three rows. The only modification is in the fourth row which says the output is one instead of zero, when both the inputs are one. Therefore, the output of Ex-NOR gate is '1' when both inputs are same. And it is zero when both the inputs are different. The following figure shows the **symbol** of Ex-NOR gate, which is having two inputs A & B and one output, Y.



Ex-NOR gate operation is similar to that of NOR gate, except for few combinations of inputs. That's why the Ex-NOR gate symbol is represented like that. The output of Ex-NOR gate is '1' when even number of ones present at the inputs. Hence, the output of Ex-NOR gate is also called as an *even function.* From the above truth tables of Ex-OR & Ex-NOR logic gates, we can easily notice that the Ex-NOR operation is just the logical inversion of Ex-OR operation.

Application of Logic Gates

Wherever the existence of, any one or more than one incident is needed to be observed or some behavior are to be taken after their existence, then in all those instances **OR** gates can be used. **AND** gates are used as Enable gate and Inhibit gate. Enable gate means acceptance of data through a pathway while Inhibit gate is the opposite of that process which means rejection of data through a pathway. **XOR** and **XNOR** gates are used in identity generation and identity check operation. **NOT** gates are also called inverter because they switch the output given to them and show the reverse outcome.

Advantages of Logic Gates

- They are quick and low energy consumptive.
- They don't get overworked.
- They can lessen the prescribed number of I/O ports needed by a microcontroller.
- They can bring about straightforward data encryption and decryption.

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INTERNATIONAL RESEARCH JOURNAL OF MANAGEMENT SOCIOLOGY & HUMANITIES

ISSN 2277 – 9809 (online)
ISSN 2348 - 9359 (Print)

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Published by iSaRa Solutions

Impact of success factors for implementing green management towards sustainability: an empirical investigation of Indian telecom industry

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ABSTRACT
Advancement is the procedure and result of making something new, having esteem. Advancement begins with creation of new thoughts or components, which experiences improvements helpful for business purposes. It might be steady, troublesome, compositional or radical. It includes the ability to adjust by receiving new items, procedures, advertising and association, and advanced by an organization. Qualities of creative advancements are: Relative Advantage, Compatibility, Complexity, Traceability and Observe capacity.

Media transmission is the science and practice of transmitting data by electromagnetic methods. It has contributed monstrously to our improvement. The Digital Divide is because of the biased access to these administrations. Because of its quick development, Information and Communications Technology part has become a significant wellspring of dangerous contamination through e-waste and ozone depleting substance emanations. ICT part partners and approach creators have started to distinguish open doors for utilizing ICTs to empower the improvement of green economy, with the help of specialists in supportable advancement.

The administrations and applications by Internet of Things bolsters the improvement of green economy, by upgrading the limit of the general population and private on-screen characters to screen regular and human frameworks continuously, and deal with the tasks and effects of these frameworks in progressively economical manners, through expanded vitality and material proficiency and substitute sustainable assets for their non-inexhaustible equivalents.(Abstract)

Keywords: advancements; media transmission; going green; manageable economy.

I. Introduction

Development is the procedure and result of making something new, which is having esteem. Advancement as a procedure begins with creation of new thoughts or components, which experiences improvements valuable for business purposes. Development might be steady, problematic, building or radical. It includes the ability to rapidly adjust by embracing new items, forms, techniques, association, and so on. Advancement includes methodical assortment of driving forces, innovativeness of representatives, assessing the plausibility of the development thought, great collaboration, venture based methodology and capacity to oversee ventures, participation with outside specialists, eagerness to face challenges, inspiration of the workers to improve the items and activity of the entire organization, proceeded with instruction of the workers, and the capacity of the organization to back the advancement exercises. Developments can be ordered into four significant discernable sorts.

Item Innovation: A great or administration that is a crisp one or of better quality.
Procedure Innovation: A crisp or better assembling strategy.
Showcasing Innovation: another advertising strategy with noteworthy changes consolidated in item plan, item bundling, item arrangement, item advancement or valuing.

Association Innovation: another authoritative technique in strategic policies, work environment or new hierarchical strategies in a company's outer relations.
Advancement is unavoidable consistently in all territories. The drivers of advancement are: Financial impulse to diminish costs; better effectiveness; extreme challenge; lesser item life cycles; Value change; Stricter conditions; Industry and network prerequisites for feasible improvement; Higher interest for responsibility; Demographic, social and market varieties; higher client assumptions about overhauling and quality; differing economy; Higher nearness of successful innovations.

The Innovation Theory of exchange cycle was propounded by Schumpeter, who considered advancements as the

beginning reason for exchange cycles. Development is the business use of innovations to genuine generation by abusing creations, as new procedures of generation, new strategies for association, novel items, and so on. He considered exchange cycles as the posterity of financial advancement in an entrepreneur society. When there are inner changes occurring because of advancement, the improvement procedure starts. The different Innovation types are: Incorporation of new assortments of merchandise; Incorporation of new generation types; Finding new markets; Finding out accessibility of crude materials at new areas; Variations in the structure of an industry.

Development doesn't emerge precipitously. It must be advanced by an organization in the financial framework. Relative Advantage, Compatibility, Complexity, Trialability and Observability are the traits of Innovation. Relative Advantage might be monetary or non-financial. It is how much an advancement is viewed as better than earlier developments satisfying similar needs. It is emphatically identified with acknowledgment. The sub-measurements of this trait incorporate monetary productivity, low introductory cost, decrease in uneasiness, reserve funds of time and exertion, and promptness of remuneration. Similarity is how much a development seems, by all accounts, to be reliable with existing qualities, past experience, propensities and necessities of potential adopters. Unpredictability is the degree to which an advancement is preposterous to expect to make out and execute. The more unpredictable is an advancement, the slower is its acknowledgment. Tradability is seen as how much a development might be taken a stab at a restricted premise. The sub-measurements are the capacity of adopters to give a development a shot portion premise, re-innovation, and the simplicity of endeavoring. Recognizability is the degree to which the consequences of an advancement are perceptible by others. The sub-measurements of this property are trouble in watching and portraying Legislature of India had announced 2010-2020 as the time of advancement, for comprehensive development in all territories. National, state, sector Innovation Councils were framed. The Department of Telecom (DOT) established Telecom Sector Innovation Council to consider different parts of development in Telecom Industry, and a report was submitted likewise.

Advancements in Telecom Industry

Transmit was first presented in Quite a while in 1851 close to Kolkata. Telephone utilities were presented in India in 1881. The primary type of correspondence was physical, when early man settled close to waterways for more noteworthy access to one another. Next smoke signals and drums were utilized to pass messages. Composed mail, transmit, wire and phone empowered men to convey quicker. Today we have radio, TV, email and web. These days the developments will quicken the pace of advancement, obliging us to adjust the better approaches for doing

Things Changing client inclinations and expanded utilization of administrations affected the incomes from customary voice sources. The colossal development in information traffic has not brought about proportionate increment in incomes, in spite of including the expenses of overhauling systems, for higher data transfer capacity. As telecom organizations catch to address these difficulties, they need to take a gander at four regions: operational efficiencies, arrange streamlining, income streams and client experience.

Telecom Industry has been the lead of the plan of action development, changing the segments using vital associations and realignment of a current business to reposition the business, or broaden its venture into new markets. Media transmission has changed drastically, bringing about noteworthy, supported and fast advancement. The Telecom Operators have embraced various models. Indeed, even a similar administrator embraces various models at better places, thinking about the necessity of the shoppers. In India telecom duties are excessively less contrasted with the levies in the majority of the nations. The multiplier impact of the inconceivably extended and improved telecom administrations has been noticeable, and has contributed altogether to the Gross Domestic Products.

National Telecom Policy - 2012

National Telecom Policy (NTP) – 2012 had the accompanying goals in regard of Innovation: To advance Innovation, indigenous Research and Development (R&D) and assembling to serve local and worldwide markets, by expanding abilities and capabilities; To set up a fitting administrative structure for the conveyance of Value Added Services at reasonable cost, in order to fuel development in business, advancement and arrangement of area explicit substance in local dialects; To fortify and create National Institute for Policy Research, Innovation and Training, Ghaziabad, as a foundation of universal notoriety, for limit constructing and empowering research in India driven advances and strategies in telecom space; To build up a committed focal point of development, to take part in R&D, specific preparing, improvement of uses in the field of Internet Protocol variant 6 (IPv6).

Significant Innovations in Telecom

The three significant mechanical developments occurred in Telecom are: Innovations in digitalization, computerization and scaling down; Innovations in the Internet, Mobile correspondences, Packet based Next Generation Networks prompting assembly of administrations; Innovations identified with Information and Communications Technology (ICT) as a conventional innovation to overhaul and justify creation, organization and exchange forms, to make new procedures and items to manufacture the data society.

Future Market size of Telecom

The Indian Telecom administrations advertise is likely develop by 10.3 percent year-on-year. Advanced cell membership in India is relied upon to increment to 810 million clients by 2021, while the all-out PDA traffic is required to develop to 4.5 billion gigabytes for each month by 2021. As per an investigation by Global System for Mobile Communications Association (GSMA), London, advanced mobile phones are relied upon to represent two out of
three versatile associations all-inclusive by 2020, making India the fourth biggest advanced cell showcase.

Telecom Sector Innovation Council

Development is viewed as an incredible supporter of the nation's riches. The Telecom Industry is seeing a colossal development, which further requires higher infiltration in the rustic territories, in cell phones and broadband associations. This is a major test to the Telecom Industry, which requires advancements in telecom items, administrations and arrangements, and appropriately DOT comprised Telecom Sector Innovation Council (TSIC). The Telecom Industry is separated into the accompanying areas: Telecom Service Providers. Telecom gear/segments makers; Universities leading exploration in the front-line telecom advances; Telecom/IT R&D Organizations; Software Services/Value Added Service engineers; Government arrangements.

TSIC recommended the center regions right now: to remote provincial zones; Value Added Services; Securing the systems; Green advances and Innovative arrangements; Tele-instruction, medicinal services, versatile banking and monetary consideration; Quality of Service; Customer Relationship Management (CRM) frameworks; Telecom Business space; Broadband system's development; Internet Protocol Television (IPTV) and Triple Play administrations.

Troublesome Innovation in Telecom

A troublesome advancement finds a crisp road, and involve in the interruption current market and worth system, supplanting the market chiefs. These organizations give push on progressions of most recent innovation and strategies to have greatest profit by present or a similar sort of bigger outlets. They center around execution of their present system. Development is around what they have just caught and broadening it. Problematic advancement requires taking a gander at the new innovation bend and at business sectors that are regularly disregarded by the huge organizations. At the point when the development can't generally support, the disturbance will most likely show up. A portion of the troublesome developments in telecom are Internet, Voice over Internet Protocol, Integration with content specialist co-ops, Internet of Things, Mobility, Artificial Intelligence, Machine Learning and Cyber Security. Dependence Jio declared another business inventive idea to the customers from fifth September 2016. This majorly affected Indian Telecom Industry, with information taxes descending from around 200 Rupees, to around 5 Rupees for every gigabyte. This disturbed the purchaser conduct and gave the majority a genuine sentiment of Digital India.

Worldwide Innovation Index

Worldwide Innovation Index (GII) is made each year dependent on the positioning of 80 parameters, among the of 126-part countries relying upon parameters like limit and achievement in different exercises including advancement. The necessary information is gathered from various associations like International Telecommunication Union, World Bank and World Economic Forum.

GII is utilized by organizations/structures and government authorities to look at nations by their degree of development. GII is the straightforward normal of Innovation Input Index and Innovation Output Index. The score is determined by the weighted normal technique.

GII of India was 81 of every 2015, 66 out of 2016 and 60 out of 2017. In the eleventh release of GII, India further improved to 57th situation in 2018, with Switzerland, Netherlands, Sweden, United Kingdom, Singapore, United States of America, Finland, Denmark, Germany and Ireland as top ten.

Green Economy and Sustainable Development

Supportability has picked up noteworthiness during the most recent two decades, and organizations are getting all the more naturally well-disposed and profiting by this procedure. Numerous organizations have taught parts of maintainability in their portfolios because of reasons extending from partners requests to industry fulfillment and benefit.

All angles from obtainment of materials to squander the executives and reusing have been seen from a supportability viewpoint. With the issues of environmental change and asset consumption increasing worldwide political and financial noteworthiness, associations are receiving 'Green Marketing' for their naturally well-disposed practices and items.

The progressions empowered by ICTs carried numerous advantages to individuals, yet have offered ascend to new sorts of maintainability challenges. ICT has produced financial and social choppiness by undermining customary monetary and social structures, testing built up standards and desires, and making new sorts of chances for crooks and psychological militants.

A portion of the legitimately beneficial outcomes of ICTs have had the circuitous impact of assisting with strengthening improvement drifts that are not naturally manageable in the more drawn out term, by expanding the interest for non-sustainable power source and material assets, and encouraging their misuse. Because of its quick development, ICT segment has become a significant wellspring of dangerous contamination through e-waste and ozone depleting substance emanations.

Indian Telecom Industry has encountered an amazing development in the ongoing past and is rising exponentially. Government is taking activities for expanding Tele-thickness and Broadband entrance in urban and provincial regions. In a large portion of the country regions, customary electric network isn't accessible and now and again the framework is far away. The accessible force quality is whimsical. The poor force quality is because of supply interference, abrupt change in voltage, under-voltage or over-voltage, voltage vacillation, and so forth. Quality force isn't common in the provincial regions, bringing about the use of battery power back-up, for making accessible un-intruded on electric stock. Diesel generator and inverter-battery frameworks are likewise utilized as exchange power sources.

Telecom Regulatory Authority of India (TRAI) has prescribed, on approach towards commencement of measures for green media communications, that all foundation and administrations in the Telecom Sector ought to be Energy and execution evaluated. Making strides toward environmental friendliness has become a need for Telecom administrators with vitality cost turning out to be as enormous as 25% of the operational consumption (OPEX). With increment in the cost of diesel and natural worry about Green House Gas Emissions, DOT is making arrangements for nonconventional vitality, sun oriented and wind power.

Dab attempted pilot extends in Universal Service Obligation Fund Phase I locales through Bharat Sanchar Nigam Limited (BSNL) so as to deal with Environmental issues and land at green answers for the Telecommunication Industry, pointing decrease in cost, lessening the force devoured, with decline in carbon discharges, and investigating the utilization of inexhaustible force sources like sun based vitality and wind vitality. The sustainable power source sun based/sun powered half breed frameworks are seen as in fact achievable and monetarily feasible for Mobile Base Transceiver Station (BTS) towers. Carbon decrease has been accomplished to aa considerable degree by diminishing the working long stretches of Diesel Generators.

II. EXPLANATION OF THE PROBLEM

Media transmission has risen as a key factor of financial and social improvement in an undeniably information serious worldwide situation. India needs to assume a viable job to guarantee quickened fair and comprehensive monetary development by guaranteeing exceptional accentuation on giving reasonable and quality media transmission benefits in provincial and remote zones.

National Telecom Policy - 2012 targets advancing innovative work, structure in serious advancements, items and administrations for fulfilling the framework needs of both national and worldwide markets with a push on security and green advances. Legislature of India has acknowledged the proposals of the Telecom administrative Authority of India on 'Approach towards Green Technologies', and bearings given to embrace measures to green the Telecommunication Industry, hoping to arrive at an enormous degree of carbon decrease, using better and reliable vitality effective hardware's and using sustainable power source advancements to a huge degree.

III. TARGETS OF THE STUDY

India has been in the bleeding edge in the use of Telecommunications and ICT to support our residents. Optical fiber is stretched out even to the remotest towns in India, empowering fast web availability at reasonable rates. Versatile Platform is perceived as the new broad communications, by expanding the advantages of remote conveyance of taxpayer driven organizations and data to the normal man. Versatile Internet Revolution gives new vistas to the residents to collaborate with the Government and different organizations.

The accompanying destinations are characterized for the investigation: Telecom Industry represents a noteworthy portion of the carbon impression, and subsequently arrangements to be surrounded for a beneficial outcome.

Guidelines for Green Telecom must consider ground substances as for utilization and impulse of diesel, as a wellspring of vitality; Sub-ideal range allotments lead to more locales and higher diesel utilization. A range approach that guarantees sufficient range can conquer this limitation; Targets for sending Renewable Energy Technologies were stringent, a sensible degree might be endorsed by DOT right now; limit factor of Solar will deflect site sharing, and consequently an appropriate report is required to find some kind of harmony for utilization of sun oriented cells for controlling Mobile Base Transceiver Stations; Target for Carbon Emission ought to be recommended on per unit of traffic premise, to cover both voice and information; Green Passport standards to be fit with International Standards.

IV. APPROACH OF STUDY

This is a reality discovering study which is distinct in nature. The examination investigated the past research takes a shot at the effect of Innovations in Telecommunication on green economy and Sustainable Development. This paper depends on audit of writing and optional information gathered from different sites, Annual Reports, diaries, magazines, papers and reference books.

GREEN MARKETING: WAY TO GREEN ECONOMY

Green Economy is a practical economy and society with nil carbon discharges and a worldwide impression, a circumstance of using all vitality needs from sustainable assets, which are naturally recharged by the nature itself. A conventional Black Economy depends on carbon-serious non-renewable energy sources, for example, coal and oil. A low-carbon economy is unmistakable from a green economy, as it despite everything produces carbon outflows. The effect of Innovations in Telecommunication is felt on all elements of Green Economy.

Sustainable power source:
To eliminate conventional wellsprings of vitality, for example, oil, gaseous petrol, coal and atomic force. The sustainable power source incorporates sun oriented electric, sunlight based warm, wind, geothermal, biomass, batteries and vitality stockpiling, and so on.

Transportation:
To acquaint vitality effective vehicles and with support exchange types of travel and cargo having less effect on the earth.

Vitality Efficiency:
this spread brilliant framework, vitality effective machines and gadgets, better structure and development advances.

Green Construction:
Retrofitting of existing structures and structures, development of new structures, and examination into new development advances.

Vitality Trading:
Involves creation and trade of monetary wares, and spotlights on money related administrations and arrangements.

Carbon Capture and Storage:
Technologies that take the over the top ozone harming substances and discover approaches to store and detach these gases.

Reusing and Waste Reduction:
Helps to confine the utilization of virgin assets, spare vitality, and decrease contamination in our condition.

Natural Protection:
Focuses on forestalling debasement and reestablishing zones that have been demolished or harmed as of now.

Farming and Forestry:
Involves finding economical, productive approaches to utilize land and other characteristic assets with the goal that these frameworks are upgraded and left reasonable for our people in the future.

Water Management:
Sustainable water use, reuse, and rebuilding are required at all levels to forestall huge pulverizations.

Research, Design, and Consulting Services
: Scientists, Engineers, and different experts, similar to support to support promoting advisors, green modelers, zero waste assembling specialists, and so on are expected to build up the following best innovations, frameworks, and plans, to guarantee a maintainable future for our coming ages.

Administrative Administration:
More experts are expected to explore complex government mediation at proper levels.

Purchaser Products:
Includes customer merchandise that are natural, biodegradable, vitality proficient, reused, characteristic, and guarantee that these items are accessible at sensible and reasonable costs. Concentrates accomplished for the Global e-Stability Initiative (GeSI), an ICT industry consortium, have evaluated that the arrangement of 'brilliant frameworks' that expansion the productivity of generation and utilization in the vitality, transportation, building and

assembling parts could decrease worldwide ozone harming substance outflow by 15 percent by 2020, contrasted with a business situation with 2002 pattern.

Concentrates done by ecological experts for media communications organize administrators in Europe, Australia and Canada have indicated that the utilization of ICTs to dematerialize physical items, administrations and procedures could bring about critical decreases in vitality and material utilization, with ensuing decreases in ozone harming substance emanations. Substitution of electronic bills sent by email for the present type of paper charges sent through the post or dispatch; more prominent utilization of Tele-work courses of action and virtual sound or video gathering gatherings in general society and private areas; increasingly proficient utilization of individual vehicles through ICT-empowered pooling and shared proprietorship; and customized open vehicle as an option in contrast to the conventional driving acts of utilizing singular vehicles, are models right now.

Various ICT-empowered open doors add to green development through environmental change relief and adaption, on a bigger scale, longer-term change of financial structures and buyer conduct. These open doors will legitimately and by implication contribute a great deal for the development of green economy and the accomplishment of maintainable advancement. 'Web of Things' will broaden the compass of the present Internet to remember objects for the regular habitat and those created by the individuals. These across the board systems will be founded on satellite and earthly correspondence frameworks, for the most part remote, and utilize radio recurrence distinguishing proof innovations and savvy sensors to empower correspondence among individuals, items and data assets all through the world.

Scholastic Approaches to Telecommunication in India

Indian Telecom Industry comprises of phone, Internet and transmission. Telecom Industry has developed more than multiple times in only 10 years, from under 36 million supporters in the year 2001, to over 846 million supporters in the year 2011. As on 31st May 2019, the general Tele-thickness in India is 89.92, with Rural Tele-thickness of 56.74 and Urban Tele-thickness of 160.79. The Tele-thickness in Kerala is 130.

Indian Telecom Industry is the biggest on the planet, after China, by the quantity of phone clients. India has one of the most reduced call taxes on the planet, empowered by super telecom administrators, and hyper-rivalry among them, with 1161.86 million Mobile endorsers, 21.29 million Fixed Line Subscribers. As indicated by London-based telecom exchange body GSMA, Indian Telecom Industry will contribute 145 lakh million Rupees to the economy, and bolster 30 lakh direct employments and 20 lakh aberrant occupations before the finish of 2020.

About the significant Telecommunication Organizations

The Indian Mobile market has transformed into four players advertise with Reliance Jio Infocom Limited as the main player, with income piece of the overall industry of 31%, Vodafone Idea Limited in second situation with income portion of 30% and Airtel India Limited with income portion of 28%. The administration administrators BSNL/MTNL (Mahanagar Telecom Nigam Limited) is in the fourth situation with Market share 11%, as on 31st May 2019.

The Wireless working associations, as on 31st May 2019; Vodafone Idea: 38,75,56,873 (33.36%), Dependence Jio: 32,29,87,567 (27.80%), Bharati Airtel: 32,03,83,358 (27.58%), BSNL: 11,58,95,287 (9.98%), Tata Tele Services: 1,14,74,972 (0.995) and MTNL: 34,38,165 (0.30%). The Indian Wired communication, the Market share as on 31st May 2019, BSNL: 107.42409 lakhs (51.85%), Bharati Airtel: 42.55958 lakhs (20.54%), MTNL: 32.23798 lakhs (15.56%), Tata Tele: 18.20031 lakhs (8.74%), Reliance Com: 6.76752 lakhs (3.27%), with a sum of 212 lakh Connections.

The Indian Wired Broadband, the Market share as on 31st May 2019, BSNL: 90.9 lakhs (62.69%), Bharati Airtel: 23.9 lakhs (16.48%), Atria Convergence Technologies: 14.4 lakhs (9.93%), Hathway Cable & Datacom: 8.3 lakhs (5.72%) and MTNL: 7.5 lakhs (5.17%), with an aggregate of 145 lakh Connections. The Indian Wireless Broadband, the Market share as on 31st May 2019, Reliance Jio: 3229.9 lakhs (57.47%), Bharati Airtel: 1159.5 lakhs (20.62%), Vodafone Idea Limited: 1089.9 lakhs (19.38%), BSNL: 125.7 lakhs (2.24%) and Tata Tele Services: 14.9 lakhs (0.25%), with a sum of 5620 lakh Connections.

Bharat Sanchar Nigam Limited (BSNL) BSNL, framed on first October 2000, is the biggest open division Telecom Company of the Govt. of India. Extreme challenge has influenced BSNL's money related execution, and the piece of the pie and benefit have descended.

The pay from administrations remained at Rupees 23,000 crores and misfortunes recorded Rupees 7,500 crores, for the money related year 2018-19. BSNL has perceived the estimation of its enormous human capital. In Kerala State, with a populace of about 3.7634 crores as on 31st May 2019, BSNL has 1,09,07,078 Mobile Connections. On nineteenth August 2019, there were 17,29,402 Wired, 6,30,164 Broadband and 60,385 Fiber to The Home (FTTH) Connections. On nineteenth August 2019 BSNL had on All India 1,68,000 and in Kerala Circle 9,580 customary representatives.

Bharati Airtel Limited (BAL)

According to TRAI, as on 31st May 2019, Bharati Airtel has 32.03 crore endorsers in India, and involves the third situation after Vodafone Idea and Reliance Jio. Dynamic

Subscriber base for BAL is 99.86%. BAL has 1,50,01,000 Digital TV Services in India. In Kerala State, as on 31st May 2019, BAL has 52,28,877 Mobiles. On nineteenth August 2019, BAL had on All India 13000 and in Kerala State 300 normal workers.

Dependence Jio Infocom Limited (RJIL)

According to TRAI, as on 31st May 2019, RJIL has 32.30 crore endorsers in India, and possesses the second situation after Vodafone Idea. Dynamic Subscriber base for RJIL is 83%. In Kerala State, as on 31st May 2019, Reliance Jio had 75,77,299 Mobile Connections. As on nineteenth August 2019, RJIL had All India 12000 and Kerala State 420 normal workers.

Vodafone Idea Limited (VIL)

According to TRAI, as on 31st May 2019, VIL has 38.75 crore endorsers in India, and involves the top position. Dynamic Subscriber base is 86%. VIL has a broadband system of 3,40,000 locales, with dissemination reach of 17,00,000 retail outlets. In Kerala State, as on 31st May 2019, VIL had 2,01,81,134 Mobile Connections. As on nineteenth August 2019, VIL has on All India 13520 and in Kerala State 469 standard workers.

V**. Conclusion**

Telecom in the cutting-edge time is the science and practice of transmitting data by electromagnetic methods. Telecom includes the utilization of electrical gadgets, for example, Fixed Phone, Mobile Communication, Radio, Television, Microwave Communication, Fiber Optics, Wi-Fi Communication, Leased lines, Data Center Services, Disaster Recovery, Orbiting Satellites, Internet, which is a tremendous overall PC organize, IOT, Machine Learning and Artificial Intelligence. Cell phones have significantly affected phone systems. There is wide spread selection of frameworks dependent on optical filaments, because of uncommon increment in information limit. Optical strands are genuinely a lot littler, they don't experience the ill effects of crosstalk, and enhancements in multiplexing have prompted an exponential development in the information limit of a solitary fiber. IPv6 gives basically boundless number of addresses expected to help the arrangement of shrewd frameworks and the web of things. Since IPv4 utilized since 1980 isn't perfect, the arrangement of IPv6 has been delayed because of monetary limitations.

Telecom has a noteworthy social, social and financial effect on the advanced society. Organizations have utilized telecom to help assemble worldwide business realms. Telecom has assumed a huge job in social connections. Long range interpersonal communication destinations are extremely well known at this point. With radio and web, open can tune in to music they have not heard before, without the difficulty of making a trip to the music store.

Media transmission clients must believe others and associations they manage on the web, and to be guaranteed that their security and different rights will be ensured in the virtual universe of the internet, similarly as they are in the physical world, making industry codes of training that will help ensure shoppers against cybercrime and different types of online maltreatment, and by making apparatuses that will permit web clients to deal with their online characters.

Presenting naturally benevolent measures for supportability can be successful just if the top administration is completely dedicated to it. It is as basic as some other advance taken by the association, since the directors set the pace for the remainder of the representatives. The Earth that supports us has constrained assets that will get drained, on the off chance that we keep on expending them quicker than their regular age. The green economy can be rich and delectable, as long as we regard and comply with the laws of our mom earth.

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International Journal of Management (IJM)
Volume 11, Issue 12, December 2020, pp 1049-1059, Article ID: IJM_11_12_095
Available online at http://www.iaeme.com/IJM/issues.asp?JType=IJM&VType=11&IType=12
Journal Impact Factor (2020): 10.1471 (Calculated by GISI) www.jifactor.com
ISSN Print: 0976-6502 and ISSN Online: 0976-6510
DOI: 10.34218/IJM.11.12.2020.095

AN IMPACT ANALYSIS OF SUSTAINABLE MANUFACTURING IN INDIA: A CASE STUDY OF GLIMPSE

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ABSTRACT

Manufacturing units of a country plays a vital role in the growth of an economy. The development of this sector is a key indicator of the economic strength of a country. It helps in raising productivity, generating employment and also supports creating fruitfulness in job and other sectors of the economy.

Make in India was inaugurated by our Prime Minister, Narendra Modi on 25 September 2014, to encourage companies to manufacture their products in India. He has launched this ambitious campaign with an aim to show the country into a worldwide manufacturing hub.

This is a world marketing strategy conceptualized by the PM of India to attract investments from businesses everywhere the planet and reworking India into a worldwide manufacturing Hub. For promoting this campaign, the online portal, logo and brochures are used for detailing 25 priority sectors of the economy.

The main motto behind this initiative is to focus on job creation, improving living standards, skill development and innovation and to align India's manufacturing sector into the Global Value Chain by encouraging Public Private Partnership (PPP), Joint Ventures (JV), Foreign Direct Investment (FDI) inflow, and advancing Ease in Doing Business (EDB). Higher education will also play a significant role in improving the quality of Research and Development (R&D). This scheme focuses on acceleration of economic growth to the new level and to drag back the economy from clutches of recession. Currently India's GDP is heavily tilted in favors of service sector. The secondary data collected from different sources like journals, magazines, annual report etc.

Keywords: Job creation, Skill Development, Research and Development, Manufacturing.

Cite this article: Sachin Bhat and Sangamesh Hugar, An Impact Analysis of Sustainable Manufacturing in India: A Case Study of Glimpse, *international journal of management* 11(12), 2020, pp.1049-1059.

http://www.iaeme.com/IJM/issues.asp?JType=IJM&VType=11&IType=12

1. INTRODUCTION

The Make in India crusade was started by Prime Minister Narendra Modi in India on September 25, 2014 out of a capacity at the Vigyan Bhavan. Fundamentally, it is an activity of the Indian Government to support global and homegrown businesses to make their items in India. To be sure, it would like to make India as a significant assembling center point. India achieved milestone after first quarter of 2015, as the top destination globally for investment, beating our next to door neighbor as well as the States.

The major outcome from this campaign is that it will create around one hundred million job opportunities for youths in India over time. The main objective is to take a share of manufacturing in country's gross domestic product from 16% to 25% by 2022, as pronounced in the national manufacturing policy. The Major objective of this scheme focuses on twenty-five sectors. These areas are Automobiles, materials and Garments, Biotechnology, Wellness, Defense, Manufacturing, Ports, Aviation, vehicle parts, synthetic substances and Electronic System, Food Processing Mining, Media and Entertainment, IT and BPM, Pharmaceuticals, Renewable Energy, Roads and Highways, Railways, Thermal Power, Oil and Gas, Space, Leather, Construction.

1.1. Why Make in India Campaign is important?

For the purpose of re enforcing the traditional practices and creating the new vision forconverting the India into a global manufacturing hub, the NDA government last year in iterated program that is run nationwide by the slogan of "Make in India" with the motive to facilitate investments, faster innovation, growth and build world class manufacturing infrastructure.

Now the question arises? why it's important to focus upon manufacturing sector, as we all know that it does makes a major impact as far as India is concerned it's always in mind that India is primarily and most importantly an agriculture oriented economy but the industry which has the most prominent contribution in the economy has also held its place quite firmly, but it was the manufacturing industries which was having less care of although it is the most important driving force or the one which needed gear up!

We have always been blessed by nature for the necessary raw materials, India is still acountry who is having ample resources, the human resourceis most dynamic, extraordinary and the service sector is touching another level of heights. The one and the onlything amiss was the manufacturing sector – a sector whichcould integrate the raw materials of the produce and the endservice.

Four pillars of make in India Manufacturing in India is that the main vision of the govt and results in national development. The initiative is constructed on four pillars which are as follows:

1.2. New Processes

The government is introducing several reforms to produce and nurture possibilities for getting FDI and foster business partnerships. This reform is additionally aligned with parameters of World Bank's simple Doing index to enhance India's ranking thereon. Make in

India recognizes simple doing business because the single most vital factor to market entrepreneurship. A number of fruitful initiatives have been already undertaken to ease of doing business.

1.3. New Infrastructure

The government is interested in developing industrial corridors and build and develop smart cities, create world class infrastructure with advanced technology and high-speed fiber optic communication platform. Innovation and research activities are supported by a fast-paced registration system and improved advance infrastructure for IPR registrations. Along with the development of infrastructure, the training for the skilled workforce for these sectors is also being implemented.

1.4. New Sectors:

This campaign has identified twenty-five sectors to market with the detailed information is being shared through an interactive and structured web portal. The government has allowed 100% foreign direct investment in Indian Railways and removed restrictions for the purpose of creating greater impact. It has also increased the foreign direct investment to 100% in defence and Pharmaceutical sector.

1.5. New Mind-set:

This initiative intends to vary by bringing a paradigm shift within the way Government interacts with various industries. It will specialist in acting as a partner within the economic development of the country alongside development in corporate sector.

2. OBJECTIVES OF THE STUDY

- To study the role of Make in India scheme as a driver for growth in electronics sectors.
- To study how India is converting into global manufacturing hub.
- To study Make in India Strategy for Electronic Products.
- To analyze impact of Make in India program on electronic industry.
- To study the achievements of Make in India program in electronics industry.

3. METHODOLOGY

The present paper investigates the challenges posed to the ‘Make in India’ campaign by the manufacturing sector in India. Secondary data from different sources like journals, magazines, Census of India, Government reports, surveys and websites have been taken to support the points. An Exploratory research was chosen in order to develop a profound understanding of the research topic and obtain in depth data about the research objectives.

4. ANALYSIS AND INTERPRETATION

4.1. Sector highlights

- **India’s IT area showcase is anticipated to reach US$ 100 billion by 2025.**

IT-BPM sends out from India are evaluated to reach US$ 126 billion (IT administrations – US$ 69 billion; BPM – US$ 28 billion; Engineering and R&D administrations (ER&D) – US$ 80.94 billion) in FY 19; the Indian IT-BPM industry remains at US$ 181 billion (FY 19); and the business is biggest manager of workforce which is around 4 million individuals.
During April-July 2019, fares of PC equipment and extras and customer hardware remains at US$ 113.99 million and US$ 148.90 million, separately.
By 2020, the Government of India means to engage in any event one individual for every family unit with computerized proficiency abilities. For an equal, the govt has propelled different computerized skilling activities that are pointed toward engaging residents with the ability of utilizing IT and cell phones.

By 2022, the IT business in India is relied upon to expand work to around 2 million direct contracts and 7.6 million roundabout contracts.

Exports of buyer hardware from India came to US$ 148.90 million from April-July'19. The top fare goals were USA (US$ 39.89 million), UK (US$ 3.68 million), Singapore (US$ 10.17 million), Israel (US$ 6.91 million) and Belgium (US$ 6.10 million).
In the innovation driven new companies, India positions third on the planet (4,750 innovation new businesses in 2016)

India has generally alluring and ideal government strategy and guidelines to help for the hardware and IT industry.

The business offers a scope of assortment of administrations, from low-end application improvement to very good quality coordinated data innovation arrangements over different verticals, with a well-created merchant base.

The Indian data innovation and programming industry sticks to quality procedures and benchmarks, with numerous organizations adjusting activities to universal principles.
Software innovation parks and extraordinary monetary zones in India give a reasonable land space for IT organizations.

Exports of buyer electronic products from India came to US$ 362.11 million of every 2017-18. The top fare goals were USA (US$ 95.61 million), Israel (33.86 million) and Belgium (US$ 30.50 million), UK (US$ 62.97 million), Singapore (51.87 million).

4.2. Ongoing Developments

The administration includes a solid represent considerable authority in changing the nation into money less economy. Various government impetuses, for example, referral reward plan to advance the utilization of BHIM application, zero help charge on railroad tickets booked on the web and dispatch of Aadhaar-based portable application are pointed toward empowering computerized installments inside the nation. May 2019, the Ministry of Electronics and Information Technology propelled the Start-up Hub (MSH) entrance.

Gadgets and computer software export promotion council and The Electronics and Computer Software Promotion Council (ESC) was shaped to supply a stage for India's IT and industry. With fares to very 200 nations, The Electronics and Computer Software Promotion Council (ESC) has effectively guided the heading of India's gadgets and programming sends out. ESC offers an extensive database of industry organizations, and items and capacities of every significant player.

The board encourages import/send out coordinated efforts, joint endeavors, sub-contracting tie-ups, and innovation moves for industry players.
It gives access to distributed reports on business sectors, items and exchange measurements, business openings, and government approaches.

The IT-BPM industry in India remained at US$ 181 billion FY19.

4.3. Development of Electronics Sector (Source: MeitY Annual Report 2017-18)

The all-over worldwide gadgets equipment industry is about US$2 Trillion, out of which, India's Production was about US$ 47 billion during the year 2016-17. The household utilization in India was about $ 86.4 billion during the year 2016-17, while trades were about US$ 6 billion.

The present worth expansion in the segment ranges from 5-30% in India, contingent on the constituent of significant worth chain. For instance, it is around 25-30% in parts, while, it is approx. 5-15% at SKD get together level.

The Electronics area has a few verticals as far as its principle constituents. At present, the accessibility of Production information of this division is constrained.

The generation profile of the Electronics Sector is as per the following

Table 1

SI. No.	Items	2014-15	2015-16	2016-17	2017-18 (Estimated till March 2018)	2017-18 (Actual till March 2018)	2018-19
1.	Consumer Electronics	55,806	55,765	64,742	73,524		
2.	Industrial Electronics	39,374	45,083	62,214	69,057	70300	80850 Est.
3.	Computer Hardware	18,691	19,885	20,382	21,401		
4.	Mobile Phones	18,900	54,000	90,000	1,32,000		
5.	Strategic Electronics	15,700	18,055	20,760	23,562	23562	28270
6.	Electronic Components	39,723	45,383	52,099	58,351	59132	67706
7.	Light Emitting Diodes (LED)	2,172	5,092	7,134	9,630	9630	13,000
	Computed Total	1,90,366	2,43,263	3,17,331	3,87,525		

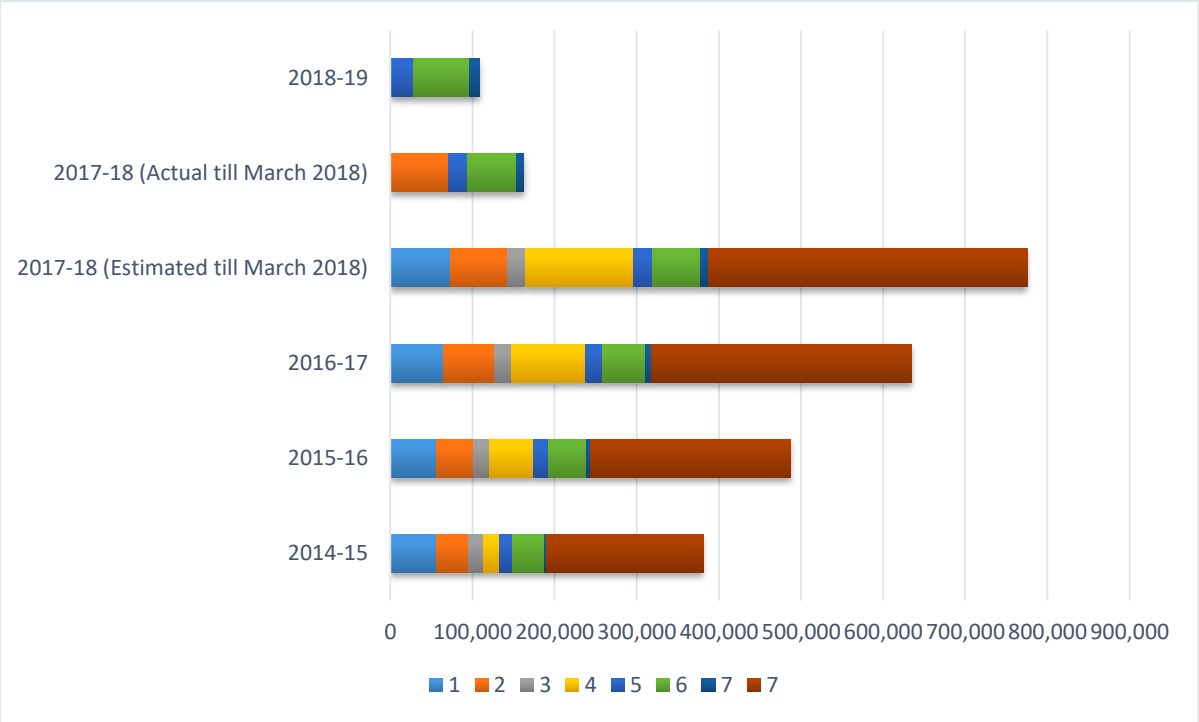

Figure 1

The all-over generation of the previously mentioned verticals of gadgets division in India is evaluated to be about Rs.3, 87,525 crore in 2017-18, contrasted with Rs.3,17,33 I crore in 2016-17, showing a development of about 22%. Asa consequence of different activities taken by the Government and endeavors of Industry, creation of gadgets in India has demonstrated noteworthy development during the most recent three years.

4.3.1. Shopper Electronics

The Flat board TV showcase has indicated a significant development over the most recent 5 years because of digitalization of communicate division and expanded reasonableness because of decrease in cost. The generation of LCD/LED TVs got a lift and has expanded to 16.0 million numbers esteemed at about Rs. 26,400 crores in 2017-18, from 14.5 million Nos. esteemed at about Rs. 23,925 crores in 2016-17, showing a development pace of about 10%. The creation for Home Theaters is evaluated to observe a development of about 0.76 million nos., esteemed at about FRs.924 crore in 2017-18, compared to 0.7 million nos., esteemed at Fts. 840 crores in 2016-17. Shopper Durables/Home Appliances: This sub-part containing Air Conditioners, Washing Machines, Refrigerators and Microwave Ovens has indicated a development pace of about 17.2% with an estimation of Rs. 44,590 crores in 2017-18, as against 13s.38,035 crore in 2016-17. According to CEAMA, the general generation of this portion of gadgets industry, including Consumer Durables/Home Appliances was Rs.64,742 crore in 2016-17 and is evaluated to develop by 13.6% to about 13s. 73,524 crores in 2017-18.

4.3.2. Mechanical Electronics

The absolute creation of Industrial Electronics during 2017-18 is assessed to be about Rs.69,057crore, as against!3s. 62,214 crores during 2016-17, displaying a development of about 11%. Mechanical Electronics portion is reliant on in general development in GDP and pace of development of assembling. There has been relentless increment in development rate from 5.6% to 8.2% in GDP from QI of 2017-18 and QI of 2018-19.

what's more, producing is becoming relentlessly above 7%. In like manner gauge for development of Industrial Electronics for 2017-18 is modified to 13% (I3s.70,300cr) and 15% for 2018-19. This area is additionally seeing development due to enhanced digitization and Robotics Applications in Industry 4.0.

4.3.3. PC equipment

PC equipment contains Desktops, Laptops, Note Books, Tablets/Net Books, Servers, other processing gadgets, Microprocessor based frameworks and Computer peripherals. With the approach of innovation, assortments of mobiles, viz., advanced mobile phones and hand-held gadgets with the abilities/power/highlights of PCs have been entering the market. Subsequently, the utilization of customary Desktops has reduced for individual purposes. In any case, the use of the PCs and its peripherals in business, mechanical and Offices is probably going to develop at a relentless pace. The Indian PC equipment Industry has been experiencing an adjustment in its item synthesis. The creation of PC equipment expanded from Fts. 19,885 crores in 2015-16 to F3s. 20,382 crores in 2016-17, showing a development pace of 2.5%.

It is relied upon to reach to about Rs. 21,401 crores during the year 2017-18, showing a development pace of about 5%.

4.3.4. Cell Phones

Portable handsets and segments producing action proceeded to accelerate during 2017-18. Upwards of 120 assembling units of Mobile handsets and parts have been set up in India during the previous three years. Out of these, around 59 units are delivering versatile handsets and rest of them are occupied with assembling different segments of portable handsets, for example, chargers/connectors, battery packs, wired headsets, mechanical parts, USB links and so on spread across India.

The generation of Mobile handsets developed to approx. 90,000 crores in 2016-17 contrasted with.54,000 crore in 2015-16, showing a development pace of about 66%, though, the creation of Mobile handsets is assessed to be about 1,32,000 crores in 2017-18. In volume

terms, generation developed to around 175 million of every 2016-17, more than 110 million out of 2015-16, displaying a development of about 60%, which is additionally evaluated to develop to 225 million units in 2017-18.

A few activities have been taken during the year prompting critical interests in new assembling tasks. A portion of the significant initiatives like Phased Manufacturing Program (PMP) for versatile handsets have assumed a key job to change the assembling space.

4.3.5. Vital Electronics

Gadgets is a key territory of barrier innovations and become an imperative component of almost all the weapon frameworks, stages and gear planned and created for protection reason.

According to ELCINA, the creation of Strategic Electronics has developed from Rs. 18,055 crores during 2015-16 to Rs.20,760 crore during 2016-17. The creation is assessed to be about Rs.23,562 crore during 2017-18, exhibiting a development of about 13.5% more than 2016-17.

Since 2017 there has been center around expanding guard creation, R&D, in-digitization just as help to MSMEs and new businesses. All the DPSUs have been actuated and doled out aggressive focuses for digitization. Be that as it may, the draft DPP 2018 has set an objective of Rs. 1,70,000 crores by 2025 and fares of Rs.35,000 crores. This requires development pace of 17-18% every year throughout the following 7 years. In view of this it is evaluated that Strategic Electronics will accomplish a development of 19-20% during 2018-19 (Rs.28,270cr). This is additionally in light of the fact that substance of IT and gadgets is developing in guard gear.

4.3.6. Electronic Components

According to ELCINA the household creation of electronic parts for the year 2017-18 is assessed to be about Rs.58,351 crore versus Rs.52,099 crore during 2016-17, displaying a development of about 12%.

The electronic part industry has seen a positive move in contrast with the assessed pattern. The section has recorded a generation volume of Rs. 59132 crores as against the prior assessed figure of Rs. 58351 crores. The plausible purpose behind this presentation might be credited to expanded interest for by and large gadgets in the nation. Government has as of late forced custom obligation on certain completed hardware merchandise along these lines giving a positive differential to their assembling in the nation. The custom obligation on PCBAs has likewise been expanded in last three-four years with an intention for reinforcing the residential EMS and Component section in India. The PCBAs for the assembling of cell phones has additionally made a positive biological system for segment fabricating. The fragment is relied upon to post CAGR of 14% during the year 2018-19 with assembling figures of Rs. 67706 crores.

It is, in any case, vital that a noteworthy offer (over 70%) of this part creation is being sent out leaving about 25% for local utilization, which is utilized in residential electronic hardware generation. Dominant part of electronic segments is not made in the nation and must be imported. In that capacity, Government has been taking proactive measures for advancement of local assembling of electronic parts.

The Indian electronic part creation is overwhelmed by electromagnetically segments (like printed circuit sheets, connectors, and so forth.,) with 29% offer and inactive segments (like injury segments, capacitors, resistors, and so forth.) with 24% offer. Further, the portions of dynamic parts (like ICs, diodes, transistors, picture tubes, and so forth.) and the related components (like optical circle, magnets, RF tuners and so on.) of the segments business are about 18% and 29%, individually.

The Electronics Manufacturing Services (EMS) industry in India is developing quickly and key worldwide players just as various residential organizations are operational in the nation. This fragment needs extremely high proficiency of activities to remain gainful. Accessibility of parts and a compelling supply chain is fundamental for EMS organizations for their development. Local organizations have for the most part followed the plan of action of remaining in low-volume and high-blend business portions, where the edges are better.

4.3.7. Light Emitting Diodes (LEDs) Products

One of the main thrusts for development in gadgets producing and for developing electronic segments request is the Indian Lighting market. The interest for vitality effectiveness has presented a prompt requirement for more vitality proficient items, for example, Light Emitting Diode (LED) items.

Driven is the decision for cutting edge vitality effective lighting for its technical and monetary excellencies. Numerous nations have set LED as the national vital industry. It is predicted that LED items will have an entrance of about 75% by 2020. Driven items spare about 70% and half vitality, when contrasted with the utilization of Incandescent Lamps (IL) and Fluorescent Lamps (FL), individually. Throughout the years, open doors for Light Emitting Diodes (LEDs) have expanded in vehicles, interchanges, signage, flagging, design and diversion parts. The open door for LEDs in the general space enlightenment fragment of private and business structures is growing quickly.

According to ELCINA, the LED Products fabricating in India is evaluated to reach Rs.9,630 crore in 2017-18, when contrasted with the generation of about Rs.7,134 crore in 2016-17, displaying a development of about 35%.

4.3.8. Car Electronics

With the development of Automobile industry and the expanding digitization of automobile controls, Automotive hardware has come to possess a significant fragment of the gadgets business. Car Component Manufacturing Association (ACMA) has anticipated that Indian Automotive Electronics Sector will reach roughly Rs.36,500 crore by 2020. The worldwide market for car hardware is set to represent 230 Billion US $ in 2020, from 140 Billion US $ in 2010. Some key advances utilized in car electronics are as Anti-lock Braking System (ABS), Body Control Module (BCM), Tire Pressure Monitoring System (TPMS), Electronic Power Steering (EPS) and so forth., while leaving, cam, wrench and oxygen sensors are the key sensors to be engaged.

4.3.9. Medicinal Electronics

Medicinal gadgets assume a pivotal job from the conclusion to the after-care period of restorative treatment and altogether sway moderateness of and access to human services. According to the Annual Report of Department of Pharmaceuticals, the worldwide restorative gadgets showcase is required to develop to US $ 332 billion by 2020, from an expected US $ 228 billion out of 2015 because of rising commonness of incessant infections; maturing populace; expanding pay and reasonableness, bringing about more appeal and usage of social insurance administrations. The Indian market is among the main twenty on the planet by showcase size, and fourth in Asia after Japan, China and South Korea. Indian market is import-ward to the degree of 70%. The Government has additionally found a way to advance this division, which incorporate the accompanying.

- 100% FDI in medicinal gadgets under programmed course
- Notification of Medical Device Rules 2017
- The improvement of a quality institutionalization system in India that depends on worldwide measures and affirms the quality, security and execution of medicinal gadgets.

- Several approach measures to address the difficulties of restorative gadgets industry.
- To advance logical and mechanical research in Medical Electronics areas in India, MeitY in relationship with Biotechnology Industry Research Assistance Council (BIRAC) is actualizing Industry Innovation Program on Medical Electronics (IIPME). The Project plans to finance an arrangement of Indian drove pilot Projects that target developments in the multi-disciplinary regions, containing gadgets, building, therapeutic gadgets, human services, programming, calculations and data innovation. MeitY will give a subsidizing backing of Rs. 10.5 crore over a time of 3 years, which has been stretched out till December 2019. Under this program, support is given at Seed, Early progress and changes to scale stages. 25 propositions are being bolstered through BIRAC under the program out of which, 18 recommendations are in Idea-to-PoC arrange, 5 recommendations are in Early Transition stage and 2 propositions are in Transition to Scale organize.

5. EXPORTS

Government has taken a few measures for the development of the fares of Electronics Hardware part. Exceptional Economic Zones (SEZs) set up to empower bother free assembling and exchanging for ex-port purposes and EHTP units are the significant supporters of fares.

100% Income Tax exclusion on send out benefits is accessible to SEZ Units for a long time, half for next 5 years and half of furrowed back benefits for a long time from that point. The Electronics Hardware Technology Park (EHTP) Scheme is a fare situated plan for undertaking assembling of electronic merchandise.

Product Exports from India Scheme (MEIS) benefits are accessible for fare of electronic merchandise under the Foreign Trade Policy (Error! Hyperlink reference not legitimate.). Different plans for send out pro-motion are Export Promotion Capital Goods (EPCG) Scheme, Duty Exemption and Remission Schemes, Duty Free Import Authorization (DFIA) Scheme, Deemed Exports, etc. Due to the powerful advances taken, trades have been giving indications of progress during the year 2017-18, when contrasted with the year 2016-17.

According to the Directorate General of Commercial Intelligence and Statis-tics (DGCI&S) data, the fare of electronic products was US $ 5962.9 Million (Rs.39,979.6 crore) during 2016-17, when contrasted with US $ 5959.5 Million (Rs.39,063.5 crore) during 2015-16.

6. IMPORTS

According to the DGCI&S information, the absolute import of Electronics into India in 2016-17 was US$ 42,878.9 million (Rs.2,87,558 crore), when contrasted with the import during the first year 2015-16, which was about US$ 40,939.8 million (Rs.2,68,105.3 crore), an expansion of 4.74% in US $ terms and 7.26% in rupee terms.

7. CONCLUSION

Make in India is an ambitious project, with an aim for sustainable growth of the economy. With relentless policies towards this end, it is possible to make India the powerhouse of electronics sector in the world.

At this moment, our Prime Minister’s Make in India campaign appears to be an imaginative marketing campaign. But there is much thought and even more work that is required to convert this to reality.

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International Journal of Computer Science & Communication (ISSN: 0973-7391)
Volume 12 • Issue 1 pp. 18-20 Sept 2020 - March 2021 www.csjournals.com

The Hidden Visor (HAWK's Eye)

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Abstract: An advanced higher end security with cost effective and less complex system is, "The Hidden Visor". In this ultra modern age, as property crimes are more predominant technology has developed an advanced security system in order to overcome predominant & contagious crimes, this technology has been used by the researchers in a more efficient way to prevent theft. It's a methodology which uses sensors, cameras & Artificial Intelligence systems to detect, capture & forward information respectively to the concerned authorities.

INTRODUCTION

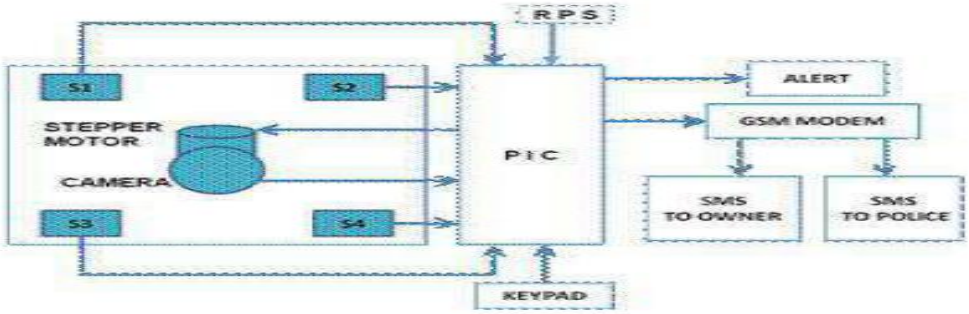
A single camera based security system which protect the valuables commodities kept in room. This system splurges around the room and records the activities and alerts the owner when any intrusion or presence is detected. The authorities can only view the footage which was alerted on the presence of intrusion. These systems consume less time help in tracking of the intruder easily in a short period of time. As and when the intruder gets detected the information about intrusion will be directed to the authorities via E-mail.

They consist of three components – sensors that detect intrusion, the camera that focuses to the point of intrusion and takes pictures and the keypad that acts as an interface with the system which allows any person to disable the system by entering the correct password.

THE DESIGN

The Hidden Visor is an advanced security system which is mainly designed to use a single camera to perform the security activities. Every personnel might have had valuables kept at his residence, a jewellery shop owner need security at night times for his property. Now, this forms a reason for security i.e. a hidden visionary. The present cctv technology has many disadvantages like multiple camera's, more cost, power consumption, and, the owner has to always view the recordings of the footage without any assurance of the theft. The Hidden Visor model can be designed using different sensors like motion sensor and vibration sensor, the motion sensor detects the motion of a human being in the particular area where the sensor is placed. Once the sensor, senses the motion or vibration it sends that information of motion to the Microcontroller. PIC16F877A belongs

to a class of 8-bit microcontrollers of RISC Architecture. PIC microcontroller is an amazing powerful fully featured processor with Internal RAM, EEPROM FLASH memory and peripherals.



PIR (Passive Infra-Red Sensor) MOTION DETECTOR MODULE

PIR sensors helps the user to sense motion, thus detecting whether a human has moved in or out of the sensors range. They are small, economical, low-power consumer, easy to use and do not wear out. They are commonly found in appliances and gadgets used at homes or businesses. They are often referred to as PIR, "Passive Infrared", "Pyroelectric", or "Infra-Red motion" sensors. To increase the efficiency of SIP (Session Initatiation Protocol) signaling, and to maintain compatibility with external VoIP systems and soft switches, technicians have created SIP compression technology for the Hidden Visor system that reduces SIP overhead bandwidth on the over the air links and backhaul links from the Base Stations to the Hidden Visor MSCs. The MSCs do the SIP compression and decompression to maintain top most interoperability with third-party VoIP systems. This also has the benefit of making more bandwidth available for mobile data applications being carried alongside voice traffic.

WORKING

Step1: User enters the password, if the entered password is correct, then the system starts, else he is prompted to re-enter the password.

Step 2: If sensors sense any change, then an intrusion is detected. Else there is no intrusion.

Step 3: If intrusion is detected, then relay triggered, stepper motor rotates the camera starts recording and an email is sent to the user.

MODERN SYSTEMS

Today's security systems are extremely effective in preventing robbery and thefts thus being a helping hand to authorities to respond to emergency situations. The mainstay of the home security system is for sure a high decibel

siren. In most cases home security systems are monitored by large companies with multiple monitoring centers. These centers house a numerous trained professionals who are there in times of need for residences and businesses across the country. These monitoring centers also can provide support for other potential disasters such as carbon monoxide, fire, freezing pipes, and much more. Modern security systems use alarms, infrared motion sensors, digital surveillance and contemporary monitoring stations. Monitoring is extremely efficient and emergency response time for triggered alarms has improved dramatically due to advancement in technology.

CONCLUSION

The Hidden Visor security system solves numerous problems faced by the multiple camera based systems at an easily affordable cost. The biggest advantage is that wading through hours of footage of empty rooms. Installation of multiple cameras to cover a single room can be avoided. Cost required for the installation is very less compared to multiple camera based system. Good view of the video footage can be obtained as the camera rotates 360°. This work can be extended to completely eliminate the use of the microcontroller and instead use parallel port of the PC to monitor the sensors. Also advanced image processing techniques can be applied to track the intruder once his position has been identified.

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IJITKM 0973-4414
International Journal of IT & Knowledge Management (ISSN: 0973-4414)
Volume 14 • Issue 1 pp. 23-25 June 2020 - Dec 2020 www.csjournals.com

Empowering India through Distance education

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Abstract: The perceived need for an alternative system of education had given birth to the concept of distance education (DE) in India in 1960s. At that time the objectives were to provide less expensive education at the higher education level and extend the benefits of the education facilities to those who had missed the opportunity to acquire knowledge, skill and training for social and economic reasons. DE in the form of correspondence education was introduced to overcome the limitations of the conventional system. Thus ivory towers were thrown open.

The Content:

The opportunity of access, affordability and convenience offered by the DE system as contributed to its increasing popularity and growth DE provided opportunities for continuing and lifelong education, thereby enriching the lives of millions of Indians, particularly working person's housewives, dropouts, marginalized sections of society persons staying in hilly and remote geographic locations, among others. It looks education to the doorsteps of the learners. Several persons have gained immensely by qualifying in competitive exams, obtaining career advancement and gained entry into avenues. The knowledge acquired from DE courses has improved their academic competency, widened their horizon, developed their decision making and policy making skills, and above all improved their social status.
There are several examples before us depicting how education has transformed the lives individuals. Today, the DE system merits a special place in the Indian higher education system because of its major contribution in enhancing the gross enrollment ratio (GER) and democratization of higher education to large segments of the Indian population, particularly to meet the demands of lifelong learning which has become more of necessity in the knowledge society. As on date , India has one national open university ,13 state open universities, more than 180 correspondence course institutes / directorates of distance education attached to conventional universities besides, there are more than 50 government / private institutes run by professional bodies private companies / corporate giants who offering DE programs.

As per the XII plan document of planning commission of India, the GER in higher education increased from 12.3 percent in 2006-07 to 17.9 per cent in 2011-12. The DE system has contributed immensely in this increase in the GER showing a growth to the tune of 8.9 per cent annually. The 12^{th} plan envisages an additional enrollment capacity of 10 million students (from 259.9 lakes in 2011-12 to 359.4 lakes in 2016-17) by the end of plan period, thereby

raising the country's GER from 17.9 per cent (2011-2012) to 25.2 per cent by 2017-18 and reach the target of 30 per cent GER by 2020-21. Of this one million has to come from DE system.

Distance education is catering to the educational needs of millions of Indians could not have received higher education through the conventional system of education is and is often the first choice for continuing and professional development of many of them. But the paradox is that open universities and DE intuitions are regarded simply as an alternative system and as poor cousins of the conventional universities. Even after six decades, there is lack of proper policy formulation on the government, which has led to the mushrooming of many spurious institutions in the name of DE churning out degrees like degree mills. Hence the degrees obtained from DE system are not being treated on par with degrees obtained from conventional universities by employers. This dilemma has not only led to a number of legal battles but the fate of lak985.hs of Indian distance learners remains uncertain on the issue of recognition of their degrees.

There is a need for an effective apex body for properly regulating the DE system. In 1985 the Indian Parliament vides the IGNOU Act of 1985 entrusted this responsibility with IGNOU i.e. of promotion, co-ordination and maintenance of standards of Open and Distance Education System in the country. IGNOU established the Distance Education Council(DEC)in 1991 under Section body for the IGNOU Act,1985 as the Statutory body for the promotion, co-ordination and determination of standards of the open university and distance education systems in the country.DES became operational in 1992.Government of India through a Gazette notification dated March 1995 made the recognition by DES mandatory. It is pertinent to mention that IGNOU and its body DES performed the role of promotion ,co-ordination and maintenance of standards in the DE system for more than 25 years, thereby enacting the role of a mentor by assisting State governments in setting up their State Open Universities :providing development assistance to DE Institutions and State Open Universities :promoting systemic research at the national and international level devising policies on DE system disbursing grants to DE institutions developing norms and benchmarks at the threshold and model levels providing funds and expertise for adoption of ICT by DE institutions providing capacity building and training to personnel working at other DE Institutions sharing its own courseware with other DE Institutions to prevent duplication and evaluating all types of Universities and Institutions for recognizing them to offer programmers through distance mode. In a nutshell DES and IGNOU have all these years played the role of a torch bearer at the national level and served as a laboratory where ODL experiments were conducted which were then replicated/emulated in /by other DE institution of the country as well as in order developing countries of the world especially in African countries and countries of the middle east SAARC and Pacific regions.

Thus DEC in its limited capacity as it was functioning within an open university had tried to stream line and facilitate DE system. However DEC was dissolved in May, 2013 and the function of DEC was assigned UGC and AICTE.

The UGC created distance Education bureau (DEB) to carry out this function .however neither any structure was created by UGC or AICTE nor any guidelines were developed. The same guidelines. Of erstwhile DEC were adopted by UGC for ODL system. Incidentally, UGC is using the same infrastructure, manpower and norms and guidelines of erstwhile DEC to discharge this major role assigned to it.

When the government is seriously making efforts to increase the gorss enrolment ration and there is growing demand for DE among diverse groups of learners, the need of the hour is to expedite the process of formulation a national policy on DE with proper vision and entrust the responsibility to concretize the required benchmarks for infusing quality in the system to a strong independent regulator. Only then the culture of self accountability can be introduced and mandatory accreditation of all DE providers based on international benchmarks can be accomplished. This only can bring credibility of DE system in India. Only the DE will be recognized as an accepted mode providing a framework outside the formal system to provide not only access but also fulfill the mandate of expansion, inclusion and excellence The National Policy should look at not only the new technological options available but also attention be paid to the new learning environments with demographic and cultural changes and to think of proper strategies for better utilization of DE system.

Conclusion

This paper emphasizes the meaning of social entreprenuership and that of corporate social responsibility and the role held in social value creating process. There are several opinions regarding the distinctions between social entreprenuership and corporate social responsibility considering the implications the impact and the stimulus. This paper points out our approach regarding social entreprenuership and corporate social responsibility based on our research by highlighting their characteristics and the way that both processes influence the social environment. A social entreprenuer is someone who recognizes A social problem and uses entreprenurial principles to organize, create, and manage a ventures to make social change. CSR is the deliberate inclusion of public interest into corporate decision- making and the honoring of a triple bottom line, people, planet, and profit.

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IJITKM 0973-4414
International Journal of IT & Knowledge Management (ISSN: 0973-4414)
Volume 14 • Issue 1 pp. 21-22 June 2020 - Dec 2020 www.csjournals.com

Challenges in Implementing Skill Development Initiatives at a Ground Level

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Introduction

Skills and knowledge are the driving forces of economic growth and social development for any country. For the economy to grow at 8% to 9%, it is required that the secondary and tertiary sectors grow at 10% to 11%, assuming agriculture grows at 4%. In such a scenario, it is obvious that a large portion of the workforce would migrate from the primary sector (agriculture) to the secondary and tertiary sectors. However, the skill sets that are required in the manufacturing and service sectors are quite different from those in the agriculture sector. This implies that there is/will be a large skill gap when such a migration occurs, as evidenced by a shrinking employment in the agriculture sector. This scenario necessitates skill development in the workforce. India is expected to be home to a skilled workforce of 500 million by 2022. About 12 million persons are expected to join the workforce every year. This talent pool needs to be adequately skilled. The following sectors are expected to drive the growth of the economy as well as play a significant role in employment.

1. Auto and Auto Components
2. Building and Construction Materials
3. Building and Construction
4. Real Estate Services
5. Electronics and IT Hardware
6. Education and Skill Development Services
7. Food Processing
8. Gems and Jewellery
9. Healthcare
10. Textiles
11. Leather and Leather Goods
12. Organized Retail
13. Tourism and Hospitality
14. Transportation and Logistics
15. Media and Entertainment
16. BFSI
17. Chemicals and Pharmaceuticals
18. Furniture and Furnishings
19. IT

20. ITES.

The employment in the manufacturing and services sector would be in excess of 250 million persons. While the school education sector is about 227 million in enrolment, the combined enrolment in higher education and vocational training is about 15.3 million. By limiting to this to the technically and vocationally qualified and skilled workforce, primarily comprising of ITI/ITC (1 million), BE (1.7 million), Polytechnics (0.7 million), we can observe that the current pool of skilled talent is around 3.4 million.

It is thus estimated that the required capacity for training the new workforce as well as portion of the existing workforce would be about 15 million annually.

Challenges in Implementation:

As skill development in a large scale takes off, implementing agencies (government, institutes – both government and private, vocational training providers, and other such implementers) would be faced with challenges that come up at every segment of the 'skill development value chain'. In other words, these are challenges that each skill development centre or groups of such centers are likely to face.
The various challenges would be pertaining to the following dimensions:

- How does a centre attract or mobilize students?
- Is there an ability to pay among trainees?
- What are the courses that need to be offered for each centre/institute, or regionally?
- Is there a demand for such courses/trades?
- Will an in-house system work or a franchisee system or a combination of both?
- How does on standardise content and delivery across a large number of centres?
- How is the training delivered?
- What is the infrastructure required and is it available?
- How can qualified trainers be found?
- Is there a system for third party assessment and certification?
- How will the project owner raise funding?
- What will the form of funding – debt, equity, grant?
- Is the model sustainable and viable?
- How would the institute guarantee placement linkages?
- How does the institute or the training provider connect with industry?

Conclusion

Given the magnitude of the skill development challenge, implementing agencies are likely to face challenges right from mobilizing trainees, developing standardized and scalable content, ensuring the availability of trainers, making available appropriate infrastructure, and coordinating placement and industry linkages. It is required that implementing agencies be aware of these challenges and prospect innovative ways to confront them.

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International Journal of Electronics Engineering (ISSN: 0973-7383)
Volume 13 • Issue 2 pp. 7-10 June - Dec 2021 www.csjournals.com

Ubiquitous Computing

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Abstract: Ubiquitous computing generally known as "UBICOMP" is a concept in the field of software engineering and computer science where computing is made to appear everywhere & anytime. In light to desktop computing, ubiquitous computing can occur using any device, in any format & in any location. A user interacts with the computer, which can exist in many different forms, including laptops, tablets and terminals on everyday objects such as a refrigerator or a pair of glasses. The technologies that support ubiquitous computing are Internet, advanced middleware, operating system, mobile code, sensors, microprocessors, new Input/Output and user interfaces, computer networks, mobile protocols, location and positioning. This is also described as pervasive computing, ambient intelligence, or "everyware". Each term emphasizes a slight different aspect. When concerned to the objects involved, it is also known as physical computing, the Internet of Things, Haptic computing and "things that think". Ubiquitous computing touches on distributed computing, mobile computing, location computing, mobile networking, sensor networks, human–computer interaction, context-aware smart home technologies, and artificial intelligence. Rather than propose a single definition for these related terms, a taxonomy of properties for ubiquitous computing has been proposed, from which different kinds of ubiquitous systems and applications can be described.

Oftenly considered as the successor to mobile computing, ubiquitous computing involves wireless communication and networking technologies, mobile devices, embedded systems, wearable computers, radio frequency ID (RFID) tags, middleware and software agents, internet capabilities, voice recognition and artificial intelligence. Because pervasive computing systems are capable of collecting, processing and communicating data, they can adapt to the data's context and activity. That means, in essence, a network that can understand its surroundings and improve the human experience. An environment in which devices, present everywhere, are capable of some form of computing can be considered a ubiquitous computing environment.

Layers in Ubiquitous Computing

Ubiquitous computing can be looked at as consisting of several layers, each with its own roles and together they form a single system.

Layer 1: The Task Management layer: known as the first or face or input layer which accepts the user tasks, context and index thus managing the complex dependencies that come within the territory.

Layer 2: The Environment Management layer: that focuses on the resources and their capabilities in addition to mapping service needs and user level states of specific capabilities.

Layer 3: The Environment layer: It tracks relevant resources and manages their reliability.

Ubiquitous computing is a combination of three technologies, namely:

Micro electronic technology: Gives small powerful device with dazzling display and low energy consumption.

Digital communication technology: Provides higher bandwidth, higher data transfer rate at lower costs along with wide world roaming.

The Internet standardization: Is done through various standardization bodies and industries to give the framework for combining all components into an interoperable system with security, service and billing systems.

Thus, wireless communication, consumer electronics and computer technology were all merged into one to create a new environment called ubiquitos computing environment. It helps to access information and render modern administration in areas that do not have a traditional wire-based computing environment.

The desticious focus of ubiquitous computing is the creation of smart products that are connected, making communication and the exchange of data easier and economical. They consider the human factor as an environment, rather than computing, environment with the use of inexpensive processors, thereby reducing memory and storage requirements and capturing of real-time attributes which totally are connected and constantly available computing or processing devices. Focusing on many-to-many relationships, instead of one-to-one, many-to-one or one-to-many in the environment, along with the idea of technology, they include local or global, social or personal, public or private and invisible or visible features and consider knowledge creation, as well as information dissemination which is constantly present. As technology progresses, the reliability factor on the different equipments used may be impacted relying on converging Internet, wireless technology and advanced electronics. Increased surveillance and possible restriction and interference in user privacies, as the digital devices are wearable and constantly connected

Applications of Ubiquitous Computing

The range of devices that are compatible with ubiquitous computing systems is indeed wide. Smartphones, Wearables, Smart speakers powered by (IVAs), Self-driving vehicles / self-driving cars, Smart home gadgets / home automation are some of the good examples of ubiquitous computing. Matter of fact, an autonomous vehicle can identify its authorized passenger through smart-phone respected application, charge itself when needed, and handle tolls, emergency responses, and fast-food payments by itself by communicating with the infrastructure thus making an even better instance of ubiquitous computing.

Advantages of Ubiquitous Computing

- Some of the benefits of ubiquitous computing are:
- a reduction in cost of services utilizing smart networks,
- improved scheduling and productivity in manufacturing,
- quicker response times in health care settings,
- more accurate targeted advertising, more convenient personal financial transactions.

Ubiquitous computing offers benefits to people by combining sensors, networking technology and data analytics to monitor and report several things, from purchasing preferences and manufacturing processes and traffic patterns as such. These computing systems detect anomalies, errors and emissions in the working environment, enabling early intervention or prevention of disaster in the workplace. It also track usage of the resources, inputs and outputs, allowing for better management of resources during high work load periods or for better distribution of resources across the time period.

The deployment of ubiquitous computing sensors and networks to rural areas also help the delivery of services to remote places. Medical services can be offered well beyond the location of a hospital or a clinic, with doctors being able to monitor patient vital signs from great distances. Education to rural areas can also be offered through the usage of interactive media delivery technology, letting students and professors to communicate in a personal context without physical presence in the same classroom.

Challenges of Ubiquitous Computing

Privacy is among the biggest challenges being faced by ubiquitous computing. Hence, protecting system security, privacy and safety in ubiquitous computing is essential. Despite the advances made in this technology, the field faces issues in areas such as human-machine interfaces and data protection in addition to the technical obstacles creating problems on both availability and reliability fronts. Despite the rapid rise of smart devices making ubiquitous computing accessible to everyone with a comprehensive infrastructure and ease of use seems difficult. Senior citizens and people in rural areas are still at a disadvantage and this has to be addressed in order for ubiquitous computing to be adopted in a wholesome or fully fledged manner.

Conclusion:

A new trend toward embedding everyday objects with microprocessors in order to communicate information referring to the presence of computers in common objects found all around us so that people are unaware of their presence. All these devices communicate with each other over wireless networks without user interaction. Pervasive computing is the next dimension of personal computing in the near future, and it will definitely change and improve our work environment and communication methods. It provides us with small portable personal assistant devices having high speed, wireless communication, lower power consumption rate, data storage in persistent memory, coin sized disk device, small color

display video and speech processing technology, these features giving the users freedom to effectively communicate and access information from any place in the world at any time.

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International Journal of IT & Knowledge Management (ISSN: 0973-4414)
Volume 14 • Issue 1 pp. 17-20 June 2020 - Dec 2020 www.csjournals.com

Desktop Virtualization: A Study on Thin Client Technology

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Abstract: A practical research result on the virtualization technology is Desktop virtualization. Its goal is to make the desktop virtual wherin the users can log in through the virtual network with any devices at anytime and anywhere to get their personal desktops. One such effective technology is The Thin Client technology which is widely regarded as an effective virtual desktop computing model. It's a secure device where programs, applications, memory, and sensitive information are stored securely in a data center instead of the device itself. These are viable alternatives to regular PCs for businesses that demand flexibility, energy efficiency, improved data security, and longer IT infrastructure lifespan.

Keywords: History of Thin Client, Thin Client Hardware, Thin Client Software, Thin Clients Empowering, Educational Institutions, Pros of thin client devices, Cons of thin clients.

Introduction:

To commence with, it is an effective PC replacement technology that facilitates immediate access to virtual desktops and applications and offers centralized computing capabilities. In the data center changes in the hardware & software and application upgradation can be easily made. It increases the workplace productivity by helping the IT teams to overcome the hitch of resolving the issues at the end user desktop location. In addition to the above the centralized backup of desktops and client access devices simplify the administrator workload. This technology is a server-based computing model that reduces TCO (Total cost of ownership). The applications run on a remote backend server and are displayed on desktop devices users can access application suites from any device connected to the server without requiring IT to install applications on separate devices.

With limited moving components, low memory, and microprocessor demands, these devices consume energy in approximate 8-20 watts in comparison to 170 watt PCs which leads in

drastic reduction carbon footprint, wherin the companies can reinvest the cost savings from electricity, elsewhere. Usage of conventional PCs would make it a complicated scenario in building the PC maps & their drives for a hundred desktops or more. This Thin Client technology is a viable option as it has minimal configuration and comes with plug and play features thus helping the company to gain significant cost savings from reduced levels of IT help desk support, low energy consumption, limited moving components, and high availability. They play an integral role in enabling remote work solutions. The endpoints are ideal for use as the foundation of a customized, enterprise remote work solution. They represent efficient, remotely managed devices that free IT departments to prioritize IT innovation for competitive advantage. Features like easy profile setups with centralized remote management and management software take off the burden of IT systems management. This devices enable flexible deployment by offering both Linux and Windows firmware versions, including a variety of codecs as well as remote display protocols such as PCoIP and Blast Extreme.

Thin Client Architecture

Thin Client Hardware

Thin Clients include hardware with low energy processors, memory, and limited moving components & offer better performance in demanding conditions in comparison to the traditional PCs. A lean client is normally one of many network computers which share computation needs by utilizing the resources of a single server. The users interact with a Thin Client device as if it is a full PC, even though all files and applications are stored on the server. It takes minimum hardware to boot up the primary OS and connect to the server.

Thin Client Software

Thin Client technology streamlines and simplifies desktop endpoint devices by minimizing software footprint on the client side. It contains a small operating system (OS) that significantly decreases client-side setup and overall administration. The software allows the device to boot and connect to the Thin Client Server. The process begins with booting the OS after which the client receives the IP address and sets other variables. Then the system connects to the server-side computing through industry-standard products or protocols such as VMware, Citrix, RDP, and browser-based connectivity. Users then log into the server using server-side credentials. Thin Client solutions facilitate cloud access which eliminate the

need for a large set of data storage, local user applications, and system assets. In this way, a good portion of software workload execution is delegated to a secure data center which centralizes different elements for increased visibility, transparency, and scalability such as information recovery, user utilities, and desktop repurposing functions.

Thin Clients Empowering Educational Institutions

Currently using PCs is questionable in academic institutions where activities like annual enrollments increase the user count. Updating computers with the latest software and programs is a time-consuming process and affects productivity which leads to poor academic performance and finally unsatisfactory results. Hence, it makes sense to consider affordable and collaborative technology that allows IT to create simple, secure and centrally manageable infrastructure. This helps teachers and students focus on important deliverables rather than having them waste time on reporting and troubleshooting IT issues. It is also important that the administration has control of each and every computer system to ensure the best possible usage of technology for educational purposes. In the case of a traditional PC environment, it would require institutions to install various software on each system which enhanced the complexity of the process. On the other hand, Thin Client technology gives the administrator complete control of the operations on each system along with the power to limit operational capability on a particular system.

Advantages of thin client devices

- **Economical:** Thin clients lack a hard drive and often use less powerful processors than PCs. Therefore, the cost of each device is lower.
- **Scaled:** Expanding a server-based system simply requires adding a thin client and connecting it to an account on the server.
- **Eco Friendly:** Thin clients have a smaller carbon footprint than PCs because they have fewer moving parts. With smaller processors and less memory, thin clients also generate less waste heat. Thin clients are centrally controlled by a server. This means they are:
- **More secure:** Since users can't install programs or store files on their terminal, thin client devices are less vulnerable to malware.
- **Easily managed:** Installing new software, patching applications or operating systems, or upgrading the network requires work only on the server rather than on each terminal.

Moreover, since user files are stored centrally, files can be found by searching a single location.

- **Less vulnerable to data loss.** Enterprises can control access to, and use of, the centrally stored files. Specifically, a system of thin clients can be configured so that the devices can access files without copying or deleting them.

D-Adv of thin clients

While thin clients are versatile, in certain scenarios, PCs provide more optimal features. The greatest drawback of thin clients compared to PCs is the lack of power. Certain types of applications, such as computer-aided design programs, require more processing power and memory than a thin client can provide. Since thin clients run software and use files stored on a server, an enterprise must invest in a powerful server and high-bandwidth network infrastructure or the system may bog down. Worse yet, a single point of failure can take an entire enterprise down. Viz, poor server maintenance or a bad network switch can stop productivity altogether.

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International Journal of IT & Knowledge Management (ISSN: 0973-4414)
Volume 15 • Issue 1 pp. 12-15 June 2021 - Dec 2021 www.csjournals.com

Balance of Body Fluid & Hydration

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Abstract: Water is necessary for all life on Earth. Humans can survive about 4 to 6 weeks without food but only for a few days without water. Intense sweating can increase the requirement for electrolyte replacement. Water-electrolyte imbalance produces headache and tiredness, and sometimes even death if severe. Water intoxication, i.e. the process of consuming too much water too quickly, can be fatal. Water deficiency in the body results into volume contraction and dehydration. Fluid balance is an aspect of the homeostasis of organisms in which the amount of water in the organism needs to be controlled through osmoregulation and behavior in such a way that the concentration of electrolytes (salts in solution) in the various body fluids are kept within a healthy range. The main principle of fluid balance is the amount of water lost from the body must equal the amount of water intake.

Introduction: Euvolemia is the state of normal body fluid volume, which include blood volume, interstitial fluid volume and intracellular fluid volume. A body fluid refers to any fluid produced by a living organism. In human beings, the body fluid can be classified into two major sections based on location, they are:

(1) intracellular fluid

(2) extracellular fluid.

The interstitial fluid, fills up the spaces between cells and is the major constituent whereas the transcellular fluid is the fluid which fills up the spaces of chambers formed from the linings of the epithelial cells. In humans, intracellular fluid makes up 67% of the total body water composition. It is composed of water, dissolved ions, and other molecules.

The extracellular fluid is the body fluid located outside the cell making upto 26% of the total body water composition in humans. Intravascular fluid (blood plasma), interstitial fluid, lymph and transcellular fluid make up the extracellular fluid.

Fluid balancing whilst sporting:

Drinking enough water each day regulates body temperature, keeps the joints lubricated, prevent infections, deliver nutrients to cells, and also keeps the organs functioning properly. Being well-hydrated also improves sleep quality, cognition, and mood. Experts suggests drinking roughly about 11 cups of water per day for the average woman and 16 for men, not all of those cups have can be plain water some can be water flavored with fruit or vegetables or from coffee or tea.

Major sporting events are commonly staged in hot environments where the average daytime temperature is generally in the range of 29 to 31°C with the average relative humidity ranging from 80 to 95%. Exercising capacity and exercise performance is reduced when the ambient temperature is high and it has major implications for competitors, spectators and officials as well. Prolonged exercise leads to progressive water and electrolyte loss from the body as sweat is secreted to promote heat loss. The rate of sweating depends on many factors and increases in proportion to work rate and environmental temperature and humidity. Sweating rates are highly variable and can exceed for prolonged periods in high heat. Since dehydration impairs exercise capacity and can pose a risk to health, the intake of fluid during exercise to offset sweat losses is highly important & recommended. Carbohydrate-electrolyte fluid ingestion during exercises has the dual role of providing a source of carbohydrate fuel to supplement the body's limited stores and of supplying water and electrolytes to replace the losses incurred by sweating. The composition of fluids to be taken will be influenced by the relative importance of the need to supply fuel and water, which, in turn depends on the intensity and duration of exercise activity, the ambient temperature, and humidity. Carbohydrate-electrolyte solutions are more effective in improving performance than plain water. There is no advantage to fluid intake during exercise of less than 30-minute duration.

Complete restoration of fluid balance after exercise is an important part of the recovery process and becomes even more important in hot, humid conditions. If a second set/pattern of exercise has to be performed after a relatively short interval then the speed of rehydration becomes utmost

importance. Rehydration after exercise requires not only replacement of volume losses, but also replacement of some electrolytes, basically sodium. Rehydration after exercise can be achieved only if sweat electrolyte losses as well as water are replaced. Drinks with low sodium content are ineffective at rehydration and they will only reduce the stimulus to drink. Addition of smalls amounts of carbohydrate to the rehydrating drinks may improve the rate of intestinal uptake of sodium and water thus improving the palatability. The volume of the rehydration beverage consumed should be greater than the volume of sweat lost to provide the ongoing obligatory urine losses. Palatability of the beverage is a major issue when a large volume of fluid has to be consumed. Drinking fluid during exercise helps to prevent a drop in performance caused by dehydration, and fluid after exercise will re-hydrate you.

The amount of fluid and the timing of drinks depend on the individual and the sport. Kick-start the exercise always well hydrated this lowers the risk of becoming dehydrated during sport. There is minimal performance benefit to being over-hydrated as drinking excessive amounts of fluid before exercise causes increased urination and feeling bloated. Develop a plan for drinking during exercise based on your own sweat rates. Immediately after exercise monitor your weight change to estimate your final fluid deficit. During recovery, you will continue to lose fluids through sweating and urine losses, so plan to replace this fluid deficit over the next 2-6 hours. Drink fluids with your recovery snacks and the following meal to achieve the goal.

Fluid Guidelines Summary :

The detrimental effects of dehydration on performance include: loss of coordination, impaired ability to make a decision, increased rate of perceived exertion and increased risk of heat stress. Ensure that you drink at a rate that is comfortable. Practice your competition fluid intake plan in training sessions. Estimate your sweat rate by weighing yourself before and after the training sessions as well as competitions. Water is an excellent fluid for low intensity and short duration sports. Sports drinks are ideally suited to high intensity stop-n-go and endurance sports. Always assess the detrimental effects on your recovery.

Conclusion: Different sports pose different challenges and opportunities for optimal hydration. For team and racquet sports there are formal breaks between play, with substitutions and time-outs, all offering an opportunity to drink. Some individual sports require drinking on the move.

Be smart and practice strategies to get maximum benefit from fluid intake with minimal discomfort. Try special squeeze bottles, or hands free drink pouches. Thirst is not an effective indicator of hydration status while exercising. There is usually a significant fluid loss before you feel thirsty. When drinking, your thirst will be satisfied well, before, these losses have been fully replaced. Aim to match your sweat rate with fluid intake as closely as possible.

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International Journal of Computer Science & Communication (ISSN: 0973-7391)
Volume 12 • Issue 1 pp. 9-12 Sept 2020 - March 2021 www.csjournals.com

Biometrics: A Boon to Administration

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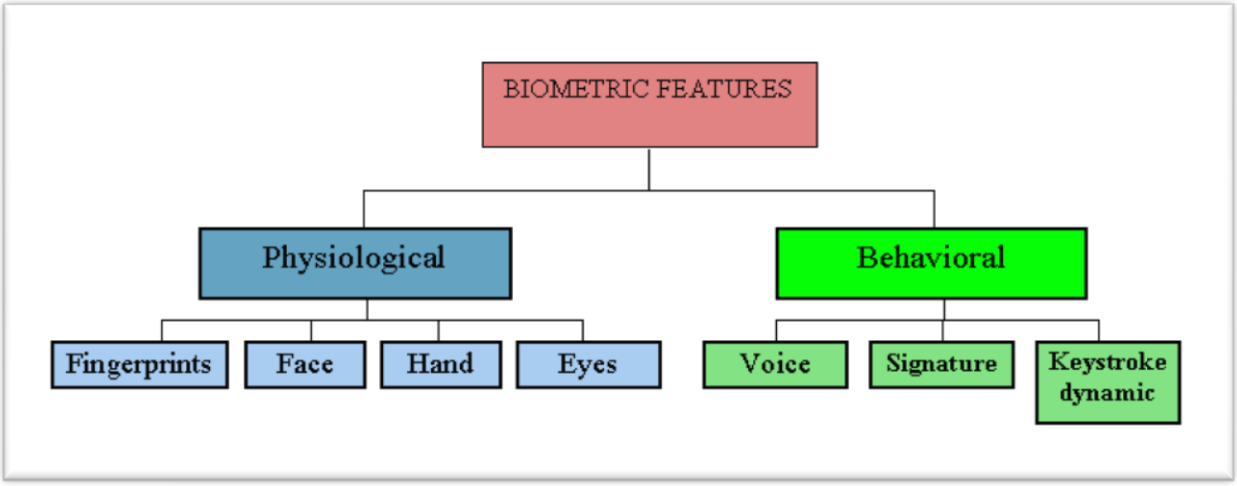
Abstract: Biometrics technology measures and statistically analyses people's unique physical and behavioral characteristics. It is used for identification and access control of the individuals under surveillance. The basic principle of biometrics is 'authentication' it accurately identifies individuals by their intrinsic physical or behavioral traits. Authentication, by biometric verification is an advanced monitoring and security system in public security systems, administration and other techie applications. Adding to security, it's a driving force behind user verification and very convenient, as it does not require passwords or security tokens to be memorized. It's a bio friendly system with contactless operations.

Keywords: FRR (False Rejection Rate), FAR (False Acceptance Rate), Identity and Access Management (IAM).

Introduction: The Biometric Systems are automatic and technological methods thus used for verifying and recognizing the identity of a living person based on the physiological characteristics of that person, such as fingerprint, facial pattern and behavioral specifics. A biometric system which is based on physiological characteristics of a living person is more reliable in comparison with the one which adopts a living person behavioral feature, even if the behavioral feature may be easier to integrate within certain specific applications.



Whenever a transaction is made biometric characteristics is the only way which guarantees the presence of the owner. Specifically, fingerprint-based biometric systems have been effective in protecting the information and the resources in a large area of applications. At present scenario of pandemic these systems have played a major role in the administration with their unique feature of face, eyes impression. Before using these systems for verification

or identification the users must be enrolled. The enrollment process involves the individual giving a sample of his or her biometric characteristic which is used by the system to generate a compact model which summarizes the distinctive features. On the basis of the application specificity these models can be databased/warehoused into a centralized database which can be distributed over a network, or can be stored in badges and rendered to the users. Each time an individual requires a verification or identification he or she provides a new sample of his or her fingerprint and the system matches this current instance with the stored model.

System Performance:

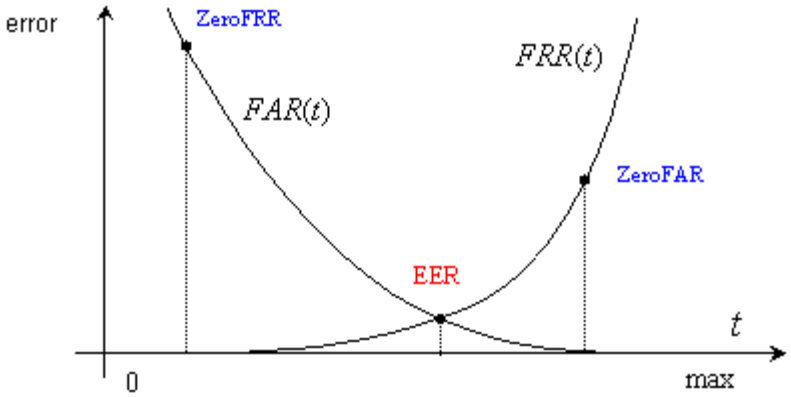
Based on the positioning on the biometric system sensor to environmental changes, from deformations to noise, it terms impossible that the two samples of the same biometric characteristic will be acquired in different sessions which exactly coincide and for this reason the matching is performed by an algorithm which computes a similarity score and compares it with an acceptance threshold, in which if the similarity is greater than the threshold, the system claims that the two samples coincide.

The main system's errors are usually calculated in terms of the following:

- FRR (False Rejection Rate) the frequency of rejections relative to people who should be accurately verified. When an authorized user is rejected then he or she must represent his or her biometric characteristic to the system. Any false rejection done by the system does not mean there exists an error in the system, rather, it might be a wrong positioning of the assigned finger on the sensor or dirt which can/may produce false rejections.

- FAR (False Acceptance Rate) is the frequency/magnitude of an unauthorized accesses, the reason being, impostors who claim a false identity.

Practically FAR and FRR depend on the acceptance threshold '**t**', which is used to set the desired security level, being strictly related to each other. Specifically the FRR(t) is an increasing function and FAR(t) is a decreasing function hence, if the threshold setting is increased to make the access harder for impostors, certain authorized people may find it difficult/hassled to gain access.



The False acceptance rate (FAR) and the false rejection rate (FRR) are the functionalities against the threshold i.e. "t"

Identity and Access Management (IAM) plays a vital role in securing enterprise systems. It's is a framework for administrating digital identities and assigning individual user access to the resources. It provides the organizations with tools to regulate their access to systems or their data and reduce the risk of unauthorized access to secure resources or data soar/theft. It enables the organizations to quickly identify the data and where it is stored & accessed by whom.

It performs three key functions:

- Identification: through user-specific digital profiles containing unique identification information.
- Authentication: via username and password combinations, PIN numbers, one-time codes, etc.
- Authorization: by granting users access based on their role, access level, or other requirements.

As all the above functions are vital, the Authentication function is highly important as the organizational data is exposed to sensitive resources and other external users. Stronger authentication measures validate digital identities and lower the risk of unverified users trying to gain access to the organizational data. A successful IAM implementation requires a strong authentication and this can be achieved by incorporating behavioral biometrics which allows the organizations to offer a more positive authentication experience for their customers with greater security than the traditional forms of authentication. As more number of organizations implement strong authentication measures as part of their digital transformation, behavioral biometrics and advancing biometric security will continue playing a greater key role in demonstrating the impact of boosting authentication with biometrics to intruders from tampering the organizational data.

Conclusion:

The Biometric systems with the IMA systems thereby incorporate a complex, definitional, technological, and operational choices which thus are embedded in larger technological and social contexts with the system's-level considerations being critical factor. The thorough study analysis of a biometric system's performance, effectiveness, trustworthiness, and suitability should take a broader systems perspective. They should be designed and evaluated in relation to their specific intended purposes and contexts, rather than general/common purposes. Their effectiveness depends much on the social context as it does on the underlying technology, operating environment, systems engineering, and system testing regimes. The biometrics technology benefits in a rigorous and comprehensive manner when approached to systems for their development based on the organizational objectives, evaluation, and interpretation. Therefore Biometric systems are not a general replacement for other authentication technologies however combining biometric approaches with other security methods can augment those applications where user co-operation is a mandate.

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International Journal of Computer Science & Communication (ISSN: 0973-7391)
Volume 12 • Issue 1 pp. 13-17 Sept 2020 - March 2021 www.csjournals.com

A Study on Big Data Analytics

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Abstract: Often Data analysis and Data analytics are often known as interrelated or interchangeable terms holding minute differences in their meanings. At the outset, the basic difference between analytics and analysis is the scale, data analytics is a broader term of which data analysis is its subcomponent. Data analysis is the process of examination, processing and arrangement of a given data set in specific ways in order to study its individual components or entities and extract the useful information, wheras, Data analytics is an overhauling/overarching science or a discipline that covers/encompasses the complete management of data. This not only includes analysis, but also data collection, data organization, data storage, and all the tools and techniques required/used.

Introduction: Big data analytics is a form of advanced analytics, which involves complex applications with elements such as predictive models, statistical algorithms and what-if analysis powered by analytics systems. It is often a complex process of examining huge amount of data to unfold the information, viz, hidden patterns, correlations, market trends and customer preferences which can help the organizations to make informed business decisions. On a broader scale, data analytics technology and techniques provide a means to analyze data sets and provide new information which can help the organizations to take up informed business decisions.

The role of a data analyst is to collect, analyze, and transform the data into accessible information. The analysts help the organizations make better business decisions by identifying the trends and patterns of their functionality on par with their objectives. The ability of the analyst to describe, predict, and improve the organizational performance has given them a increasingly high demand and

recognition globally and across industries. Data analysis performs the evaluation of data through analytical and logical reasoning which leads to an outcome or conclusion within a stipulated frame/context. It is a multiphased process that involves a number of steps, approaches, and diversified techniques. The approach towards data analysis largely depends on the type of data available for analysis and the purpose of the analysis.

The importance of big data analytics:

Big data analytics through specialized systems and software can provide a positive business-related outcomes as follows:

- Opportunities for generating new revenue
- Effective marketing to the core
- Better customer service
- Efficiency in operations
- Competitive edge over rivals

Its applications allow the data analysts, data scientists, predictive modelers, statisticians and other analytics professionals to analyze growing volumes of structured transactional data including other forms of data that are often left untouched by conventional Business Information systems and analytics programs. It's a mixture of semi-structured and unstructured data where the internet of things (IoT) such as internet clickstream data, web server logs, social media content, text from customer emails and survey responses, mobile phone records, and machine data captured by sensors are counted upon.

Functionality of big data analytics:

The data clusters and NoSQL systems are basically used as launch pads and staging areas for the data. Before getting loaded into a data warehouse or analytical database for analysis it is usually transformed into in a summarized form i.e into a more conductive and relational structures. However, big data analytics users adopt the concept of "Data Lake" that serves as the primary repository for incoming streams of raw data. In such architectures, data can be analyzed directly in a data cluster or it can be run through a processing engine such as 'Spark'. As in data warehousing, sound data management is a first step in the process of big data analytics. Data being stored in the databases must be organized, configured and partitioned properly in order to get good performance out of both extract, in scenarios such as transformation and loading and analytical queries. Text mining and statistical analysis software will also play a big role in the process of big data analytics by mainstreaming business intelligence softwares and data visualization tools.

Once the data is ready, it can be analyzed with the software commonly used for advanced analytics processes such as :

- Data mining: which shift through data sets in search of patterns and relationships.
- Predictive analytics: which build models to forecast customer behavior and other future developments.
- Machine learning: which taps into algorithms to analyze large data sets.
- Deep learning: a more advanced machine learning.

Challenges and uses of Big data analytics :

Its applications often include data from both internal systems and external sources, such as weather data, or demographic data on consumers compiled by

the third-party information services providers. In addition to this streaming analytics applications are common in big data environments as users look to perform real-time analytics on data fed into the systems through stream processing engines. Early big data systems were mostly deployed on premises in large organizations that collected, organized and analyzed massive amounts of data. But cloud platform have made it easier to set up and manage Data clusters in the cloud. Thus supporting the distribution of the big data framework on the clouds. The users can now spin up the data clusters in the cloud, run them as long as they need and then take them offline with usage-based pricing which doesn't require any software licensing

Big data has become increasingly beneficial in the field of supply chain analytics. It uses big data and quantitative methods to enhance the decision making processes across the supply chain. Specifically, these big supply chain analytics expands datasets for increased analysis that go beyond the traditional internal data found on enterprise resource planning (ERP) and supply chain management (SCM) systems. They also implement highly effective statistical methods on new and existing data sources. The insights thus gathered facilitate better informed and more effective decisions that benefit and improve the supply chain. Potential drawbacks of big data analytics include lack of internal analytics skills and the high cost of hiring experienced data scientists and data engineers.

Conclusion: The term big data is often used to refer to increasing data volumes encompassing the increase in the variety of data being generated by organizations and the velocity at which that data is being created and updated. The three vital factors i.e. volume, velocity and variety known as the 3Vs of big data is a concept thus popularized. With a distributed processing framework and an open source projects it has clustered a platform built on commodity hardware and geared big data application softwares. It has began to take a firm hold in the or-

ganizations and the public sector, along with data clusters and various related big data technologies that have sprung up in and around it.

Their applications primarily province a large of internet and e-commerce structures as well as analytics and services providers. In the upcoming years, big data analytics can be increasingly embraced by retailers, financial services firms, insurers, healthcare organizations, manufacturers, energy companies, organizational administrations and other as such.

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International Journal of IT & Knowledge Management (ISSN: 0973-4414)
Volume 14 • Issue 1 pp. 41-45 June 2020 - Dec 2020 www.csjournals.com

Strengthening Industries and Educational Institutions linkage in INDIA-An empirical approach

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Abstract: In this paper we have tried to bring out the actuality that the educational institutions and industries relationship-linkage for the growth of the Indian economy. This paper discusses about relationship between the industry-institute, integration of industrial practices at the institutes, employability skills and its development. We found that the industries require graduates with employability skills and educational institutions are the centers, which generates the graduates. There is a gap between graduated people that they lack in employability skills as what they have learnt is different and what the industries do is different. There is a need to fill the above gap by creating integration of industries and institutions. There is a need to information communication between the two. The practices of the institutes are to be developed to the level of requirements of the industry. Measures are to be taken while designing curriculum, syllabus, assignments, internship, projects and seminars to fill the gap between these two.

Introduction

India has been always observed as economically growing country in the recent years. Now it is one among the knowledge economies. Skill-based activities have contributed to the maximum to this growth. These activities are dependent on qualified workforce which is fed by higher education system. Now it is widely accepted that higher education is critical to India's emergence in the global knowledge economy.

Educational Institutions have long been recognized as source of knowledge creation, innovation, technological advances and entrepreneurs. Across the world, educational institutions and universities are being positioned as strategic assets in innovation and economic competitiveness, and as problem-solvers for socio-economic issues affecting their country and its people. In order to fully take advantage of the potential of educational institutions and universities in this aspect, governments and institutions are actively pursuing strategies to strengthen and raise educational institutions linkages with industries through research, projects, assignments, internship programs, industrial visits and other forms of alliance.

Educational institution and industry linkages for development of trained and skilled manpower:

An educational institution - industry linkage is very essential to bring skilled and efficient manpower. The linkage between institution and industry should not be partial, it should be a kind of partnership between both parties where both work with a common goal of developing human resources. It should not merely be confined to providing on-the-job training, lectures or seminars to the vocational students by the experts form industry, but should include the industrialist's cooperation right from the planning of core curriculum stage to the placement stage. A strong and healthy linkage between the institution and the industry has several benefits to the institution, learners and the industry as well. The institution can start courses after identifying the various manpower needs of the industry so that the students find employment on completion of the course. The institution can also develop the curriculum for the courses and revise and update it on a regular basis based on the changing and flexible needs of the industry. Thus keeping the course in demand among the student community - The students would be benefited with the sharing of infrastructure and sharing of expert services form the industry.

The institution can also make use of the on-the-job instructors for evaluation of their students based on their skills. Finally, for the placement of their students as well. On-the-job training which is an important feature in higher education can be greatly facilitated with a strong linkage with the industry. This would in turn provide for the industry trained and skilled manpower to meet its requirements.

Memorandum of Understanding (MoU) between institute and industry:

Establishing of a MoU with the Industry is necessary as the institute can be sure of its students been absorbed by that particular industry for a job. This would benefit the students of the institute in obtaining effective training/internship and a job in reputed organizations. It would also expose the students to latest technology in the case of science, engineering, commerce and management courses. Students of all courses would also get the experience of working in a more professional and high-tech environment. When asked the Heads/Principals of Educational institutions whether they had established any MoU with the industry, 50% and 25% of the Principals at the UG and PG level respectively, claimed that have not made an attempt in maintaining this linkage. It was mostly the Commerce and Management based Colleges that had not made a serious attempt in maintaining this linkage. From the above responses given by the heads of educational institutions on the absence of MoU with the Industry by a large number of institutions both at the UG and PG level, it can be concluded there is inadequate interaction on the part of the institutions with the industry. This in turn is definitely going to affect the quality of education, training and internships/ placements provided to the students. Hence it can be said that the, inadequate interaction of Education institutions with industrialists in making Education more work oriented is true.

Institutions interest in establishing MoU with industries

Interest to establish MoU with industries			
Streams / Fields	Interested	Not interested	Total
Commerce & Management	90%	10%	100%
Engineering	80%	20%	100%
Humanity and Social Sciences	05%	95%	100%
General Foundation Courses	100%	0%	100%
Total (in %)	68.75%	31.25%	100%

Educationalists & Industrialist Opinion on New Courses to be introduced:

The heads/principals of educational institutions as well as industrialists were at an opinion based on their experience and knowledge to suggest some new courses that would give scope for greater employment opportunities in the country. There were many who preferred not to make any suggestions. But those who made suggested the following courses:

(a) A course in Purchasing and Storekeeping could be introduced as apprenticeship slots and employment opportunities are available in this field.
(b) A course in Multipurpose Health Worker or Nursing to be introduced and also could have vertical mobility in B Sc (Nursing) course.
(c) A course in Building Maintenance be introduced taking into consideration the growing number of Housing co- operative societies which can generate a lot of employment for the passed-outs who can undertake maintenance & minor repairs of the buildings.
(d) A course in Health and Beauty culture is to be introduced considering the demand for Beauticians.
(e) A course in Plumbing could also be introduced considering the demand for plumbers for smaller jobs.
(f) A course in Library and Information Science be introduced which would provide qualified and trained librarians at the village and local level smaller libraries, and also in Colleges and Schools.
(g) Courses on Photography, Theater and Media Communication which would have scope for employment.
(h) Travel and Tourism course should be modified to suit the needs of the tourists.

Industry Involvement in Curriculum Development and Management:

The curriculum is to be developed within the national curricular frame and it should be based on the identification of job opportunities, specification of duties or tasks to be performed in the job, and analysis of each task in terms of knowledge, skill and personality traits required to perform a particular task.

Sharing Infrastructure:

The facility to share infrastructure is one of the greatest advantage of having an effective institution- industry linkage. Modern industry today uses the latest technology to keep in times with the rapidly changing technology. This technology is many times too expensive and out of the reach of the private and common Government aided institution with limited funds.

Hence, the only way for students to get exposure to these new tools and equipments is in the industry where they have to undergo internship/project work/on-the-job training. Establishing a MoU with the industry, would benefit the students tremendously. For this, an extra effort has to be made from the part of the institution offering the technical and management course in establishing this relation.

Expert Services:

An institution - industry linkage also facilitates colleges in making use of expert services form industry in delivering class room lectures. Besides sharing of infrastructure, there can be sharing of expert services form the industry as well. These experienced and knowledgeable persons could be used as Guest Faculty/ Special Lecturers for the courses. The programme makes provision for Guest Faculty on Honorarium for teaching of the courses. These specialized experts from the industry could be used to share specialized knowledge with students. The institution should get successful entrepreneurs from the industry to address students so as to encourage and motivate them to go in for self employment. Experts are known to be busy with their own work schedule. Relations should be maintained with the industry such that, the experts are willing to spare time for teaching/training students. They should be willing to be flexible and adjust their timing with that of the teaching in the colleges or industry where ever it is planned to be conducted.

Evaluation of Students:

If the employers/industrialists are involved in the process of evaluating the student's performance, they can see for themselves the quality of the product coming out of this system. Hence, it is advisable to keep these experts as members of the panel of examiners, and suitable remuneration or honorarium may be paid to them for this purpose. However, the system in reality slightly differs. The industrialists grade the students under them at the end of the training. But the final grades are eventually given to the students by their college teaching faculty.

Placement:

If the linkages are properly established with the concerned industry, students can get employed by the industry where they underwent internship/project work/visit/on-the-job training. If the students cannot be employed by that particular industry, the student could be recommended by them for absorption in other organizations. The industry too would benefit as they would be in a position to choose from the many students, those suitable for their firm. The industry would be in a position to well in advance the capabilities of the student to be employed. Suggestions made by educationalists towards Placement of Students:

(a) Campus interviews form the related industry could be help in the College campus. For example for courses like Bio technology, Bio- Tech firms can be contacted about the course curriculum and campus interviews can be conducted in order to absorb students.
(b) Govt. and Non- Govt. agencies should be encouraged to coordinate with the Colleges to absorb graduate students.
(c) Some posts should be reserved at employment exchange for fresh passed-outs.
(d) Maintaining a good MoU with industry is the best solution that would encourage firms to absorb students soon after graduation.

Conclusion:

It can be concluded that with a strong institutions-industry linkage, not only does the institute and the students benefit from it, but it would benefit the industry as well. Industry can be involved in taking an active part in the general, technical and professional programme at different levels. Experts from the industry can be involved in the development of the curriculum of the courses and also their help could be sought in the active management of the programme. Sharing of infrastructure and of experts from the industry is another benefit to the institute. And finally, the industry would be benefited with the choice of skilled personnel to choose from. Students on the other hand would seek employment for themselves.

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IJITKM 0973-4414
International Journal of IT & Knowledge Management (ISSN: 0973-4414)
Volume 14 • Issue 1 pp. 34-37 June 2020 - Dec 2020 www.csjournals.com

Linkage between Higher Education and High-tech Industry

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Abstract: Higher education plays a very important role in education system in India. There are several types of higher education institution in India mainly universities deemed to be universities, colleges, institutes of national importance, post graduate institute, etc. A University can be setup by the state legislature other post graduate institute and polytechnic that are recognized by the all India council of technology education (AICTE). In order to research the Industries should give some finance to the universities.

Introduction

Here we highlight a few key aspects on the higher education system

1. Funding & fee regulation

The funding of fee regulation should be affordable by the student on minimum range of *22000 to 72000* per year and students may get loan facilities.

2. Uniformity

The salary remuneration structure for the universities across different universities should be uniform & in nominal term.

3. Affiliated colleges

Under graduate teaching is mostly done at colleges affiliated to the university and is based on pre-determined curriculum. These colleges can include professional education also. The term affiliated means it is registered under some university abiding to all rules and regulation and procedure as framed by the universities, Usually admission are done on the bases of performance at a qualifying school leaving examination.

4. Separation of teaching and research

They should give separate opportunities for the research scholar's through the council of scientific research (CSIR) and creation of social science research institutes through the Indian council of social science.

5. Specialized institutes for professional education

For the admission in professional education like medical, law, teacher training and business administration etc, CET exams will be conducted and on merit basis student will be admitted in colleges.

6. Linkage between higher education and hi-tech industries in India

The high technology industries in India have seen some growth in communication and computer related services, it has increased in recent years which has resulted in increase in need of the knowledge and skilled related to communication and computer application in higher education. The Development technology knows how industries should give new technology to education institution and provide information and training to staff and students by arranging workshops and orientation programmes to college students through which they can inculcate the quality or skill that are needed for the company, that is labour linkage, which means they will train the students.

7. Indian bio technology and pharmaceutical industries:

In this training opportunities are create for staffs to improve access to research facilities and expensive equipments, thus providing access to government sponsored research fund.

8. Rise in Private Participation:

Four of the states, (*Andhra Pradesh, Tamil Nadu, Maharashtra and Karnataka*) are in the top five by share of private engineering colleges and are the top seven states as measured by share of private medical colleges. The surge in private engineering and technological education can be seen from the fact that the state of Andhra Pradesh had just one private engineering college in 1978, whereas the number rose to 174 in 2002, compared to 14 government colleges; and 53 medical colleges, compared to 20

government colleges. In Karnataka, their number rose from 17 in 1978 to 72 in 2002, in Maharashtra from 1 to 141, in Tamil Nadu from 0 to 137, in Haryana from 2 to 22, and in Uttar Pradesh from 1 to 58. The private sector also dominates degree and diploma courses in Ayurvedic, Unani, Homeopathy, and physiotherapy. If one ignores two states, Jharkhand and Uttarakhand, who top the list with just two private medical colleges and no public medical college.

9. Quality of Institutions:

However, while the educational sector has certainly responded to the growth of the high tech sector, the quality of the response has not been as encouraging. In terms of the student teacher ratio, three of the top five states are from the seven states that have been identified, but three of these, viz. (*Maharashtra, Punjab and Haryana*), are also below the national average, while Andhra Pradesh is just at the national average. Similarly, in terms of proportion of below average institutions, four of the seven states are among the lowest five states, three others, including (*Karnataka, Maharashtra and Haryana*) have a high proportion of institutions with a below average rating. When one looks at the pass rates, none of the seven states figure in the list of the top five.

10. Standardization of Curriculum and Affiliation of Colleges:

An affiliating system wherein colleges prepare students for a university-administered examination based on a uniform curriculum at the university level leads to very large universities thus reducing the colleges to teaching institutions and limiting innovation in curriculum, except to the extent allowed in Autonomous Colleges. To add to this, the regulatory institutions such as UGC appear to be involved in exercises to standardize the curriculum. It is difficult to introduce innovations in curriculum as there are far too many colleges, whose faculty would have to be retooled. Consequently, many colleges continue with pre-defined content. This situation has a higher adverse impact where technology is changing faster. In such a scenario, it is impossible to think of innovative multi-disciplinary courses that can induce higher research orientation and leverage increasing convergence across various scientific and engineering disciplines.

11. Poor Accreditation Capacity:

The lack of a robust accreditation system adds to the issue. The incipient accreditation bodies are all in the government sector and have limited capacity to accredit the growing number of institutions. Reputation of institutions is dependent more on its selectivity in intake of students than on its curriculum and pedagogy. This makes the role of industry in signaling quality of higher education, ambiguous companies can simply leverage the stringent selection process of technical higher education and de-emphasize the quality of instruction. This is especially true when the employees would have to be re-skilled after recruitment, e.g., in IT, where engineers from different streams enter the software sector

Conclusion:

The institutional response is therefore one of significant growth in recent years, but in a few select states that are relatively richer and led by the private sector. The private sector is not just establishing professional colleges, it is also establishing universities. Given the low number of private universities established by state acts and the much larger number of "deemed to be universities", the preferred entry mode of the private sector would appear presumably, reason being, the regulatory constraints involved in establishing a university by state act is very large. With the approval of a large number of private "deemed to be universities", the mix of universities is also changing.

We have adopted an eclectic approach to linkages between High-Tech industries and the higher education sector. This limited degree of autonomy in research and educational institutions when coupled with a relatively high degree of agency in industry has led to many linkages between these two sectors, especially in externally oriented service and industrial sectors like IT and pharmaceuticals despite the difficult regulatory environment. The size of the high-tech private sector in India, particularly the IT industry, has permitted it to try and evolve a compensating response to the regulatory obstacle.

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