Educational Computing for the Visually Impaired in India

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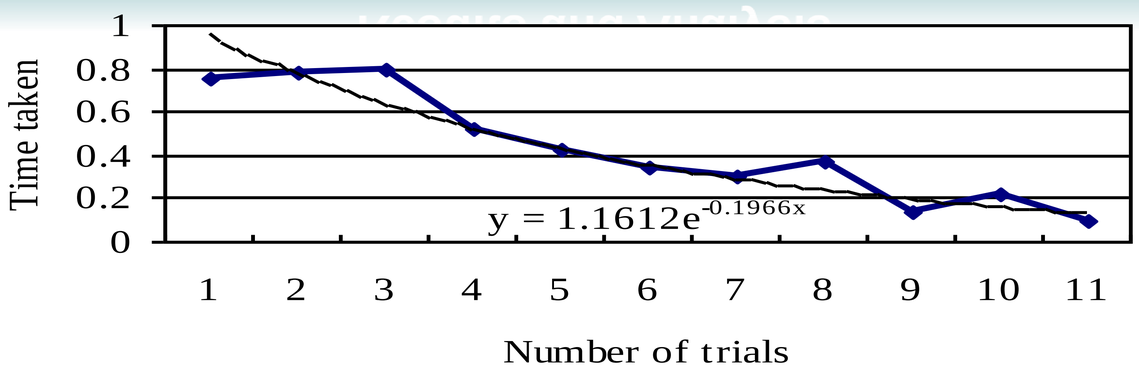
Abstract

The aim of this poster is to present software engineering methodologies that were employed in developing educational solutions for the visually impaired. Empirical studies and experiments were conducted to measure the impact of the educational tools on the learning and cognitive abilities of the target user group. This study highlights the various technological and design challenges that were faced while developing and deploying these customized learning solutions. Observations and results indicate that there is significant merit in developing and utilizing such applications for the educational empowerment of the blind.

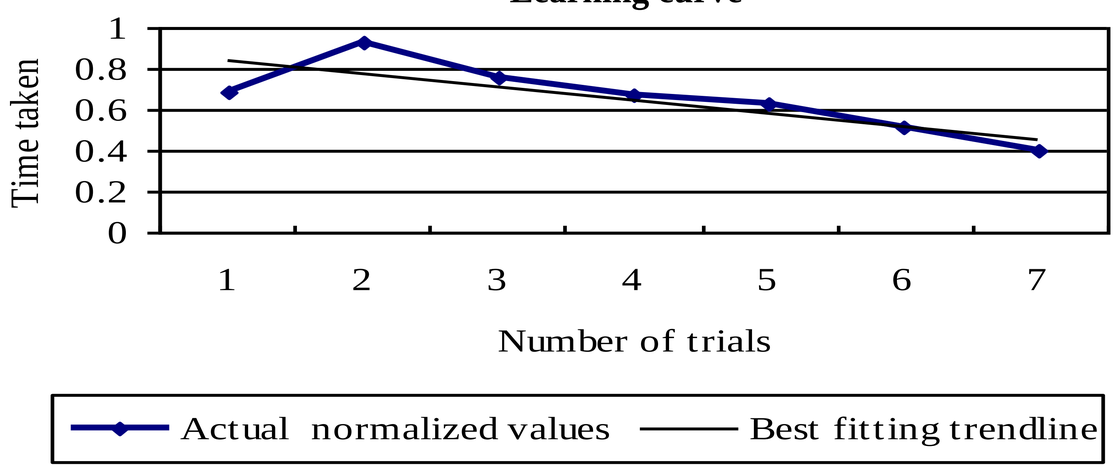
Introduction

- **Computer based educational tools play an important role in the learning process of a student**
- **Existing solutions are designed to be graphical and heavily based on human-computer interaction and rely on visual feedback**
- **Very few educational solutions that use audio based feedback are designed keeping in mind the regional, cultural and educational background of the visually impaired**
- **Voice based feedback appeals to the cultural and educational background of the western audience**

Results and Analysis

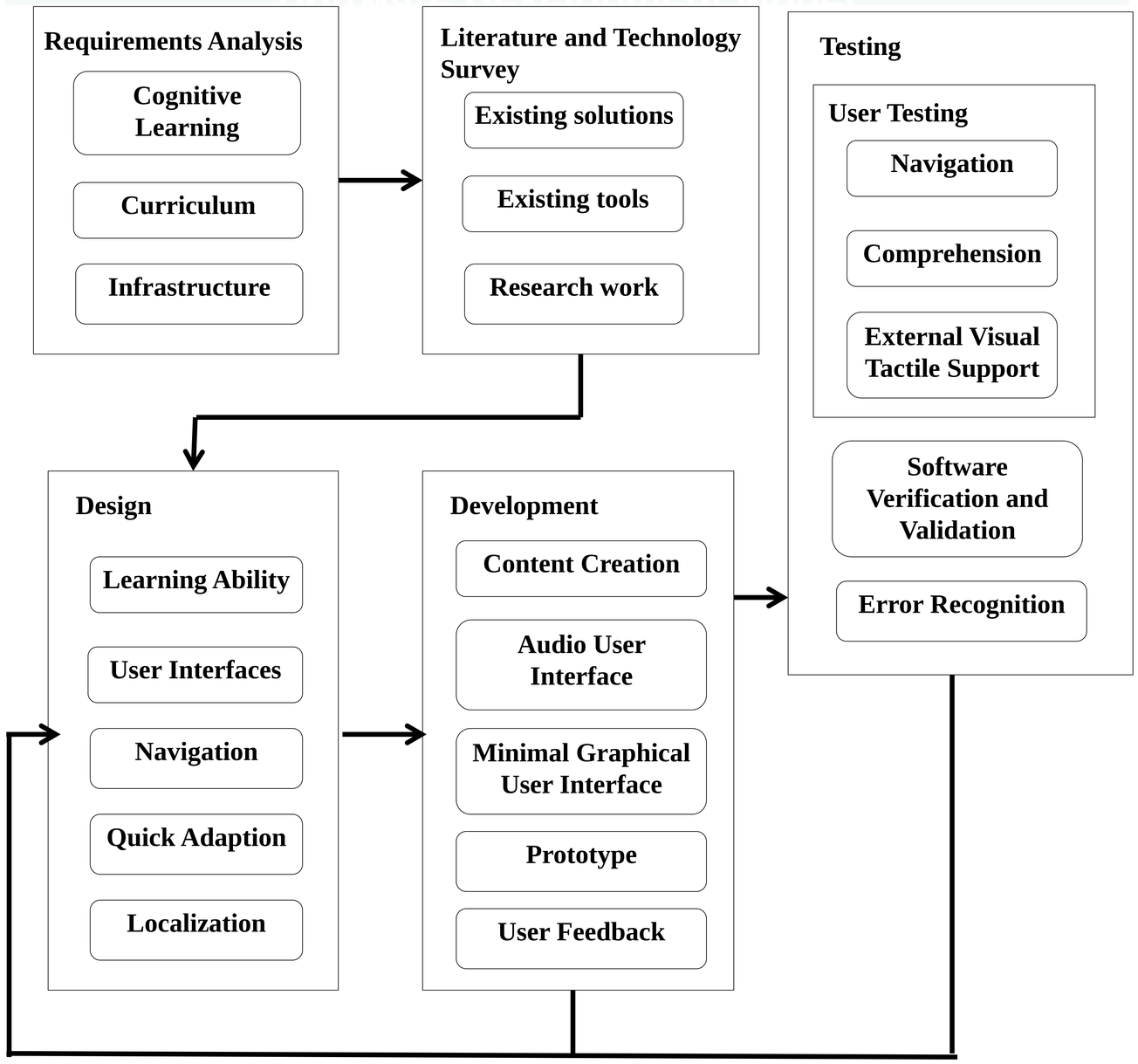


Learning curve



Forgetting curve

Software Development Model



Conclusion

- **Software solutions developed for the visually impaired community have had a positive impact on the learning ability of the students**
- **Customized design based on**
  - **Locality**
  - **Culture**
  - **Educational curriculum**

  is more feasible and able to meet the requirements of the users
- **Proposed model and associated evaluation techniques will serve as a yardstick in development and deployment of educational assistive technologies**

Citation

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