Breaking Language Barriers: The Role of AI-Powered Translation Tools in Modern Libraries

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Abstract
AI-powered translation tools are evolving libraries by breaking language barriers and giving accessibility for diverse uses. This study examines the impact through a survey conducted at University of Sargodha revealing strong user demand, use with their need and encourages them to use more resources of the library. Before offering these tools there are also some challenges, including staff training, awareness, recommendations, including workshops and campaigns to ensure successful adoption.AI translation tools are important for modern libraries to assess resources and global connectivity.This revolution makes the library more inclusive but also stay relevant in an increasingly globalized world.

Keywords: AI-Powered translation tools, Accessibility in Library, Challenges, Global communication

Introduction
Libraries are going through a big change by bringing in Artificial Intelligence. Language barriers are being reduced by the help of AI translation tools. We will examine how these tools assist library patrons overcoming language differences. These translation tools are going to be helpful in the library as digital assistant, suggesting books to patrons by using translation memory tools, revolutionizing the libraries. But as with a change, there may be Challenges. Before offering such tools Library staff should know how to use them and help users of the library to educate them on how to use these tools effectively without any hurdles. Before using of the Al translation tool library patrons should have an idea of this-that these translation tools exit. For this Library has to give awareness related to AI translation tools to library patrons. Library patrons should have enough knowledge to understand what can these tools can do and how they can are beneficial for them. AI translation tools facility user with there preferred

language to understand text of the book , document and other material. In education AI translation tools provide access to academic material in different languages to students and researchers.

Research Objectives
- To prioritizie language support in libraries.
- To evaluate user comfort with Al-based translation tools for independent use.
- To assess the need for Al-based tools in library services.
- To understand familiarity with Al tools like Google translate and Chatgpt.
- To encourage patrons to utilize library resources by translation tools.

Research Questions
- How do AI based tools facilitate access to library resources.
- How familiarity and comfort are users with AI translation tools.
- What is the preferred language to understand text or other materials.
- What are specific needs of the user for these tools.
- How can we encourage greater use of library resources.

Significance
AI translation tools revolutionize library by breaking language barriers, enhancing accessibility and ensuring for diverse patrons. Providing access of resources in user preferred language.

Delimitation
However, the study is limited to one institution(University of Sargodha) and relies on data from WhatsApp polls which may lack in depth.

Literature Review
Technological advancements are transforming libraries globally. As the library evolves they offer new services such as AI-based translation tools which are essential for modern libraries. These tools positively impact patrons by making these resources accessible to non-speaker. Many big libraries like the Library of Congress, New York Public Library, National Library of Spain providing AI translation tools to translate text of books, Manuscript, and documents. The use of these tools helps library patron to use more library resources as they feel comfortable using tools to encourage more usage of resources. However, library staff must be well-trained to use these tools efficiently and assist patrons. Selecting the right tool is critical to matching patrons needs. Some tools are available free of cost with useful features that simplify tasks for both staff and users. Initial trails showed that patrons found these tools helpful for addressing issues related to language, grammar, paraphrasing, and understanding texts in their preferred language.

AI-powered translation tools play an important role in the education system that helps in breaking down the language barriers and providing educational resources easily. These translation tools provide access to academic material in different language to the students and researchers.AI translation tools create an
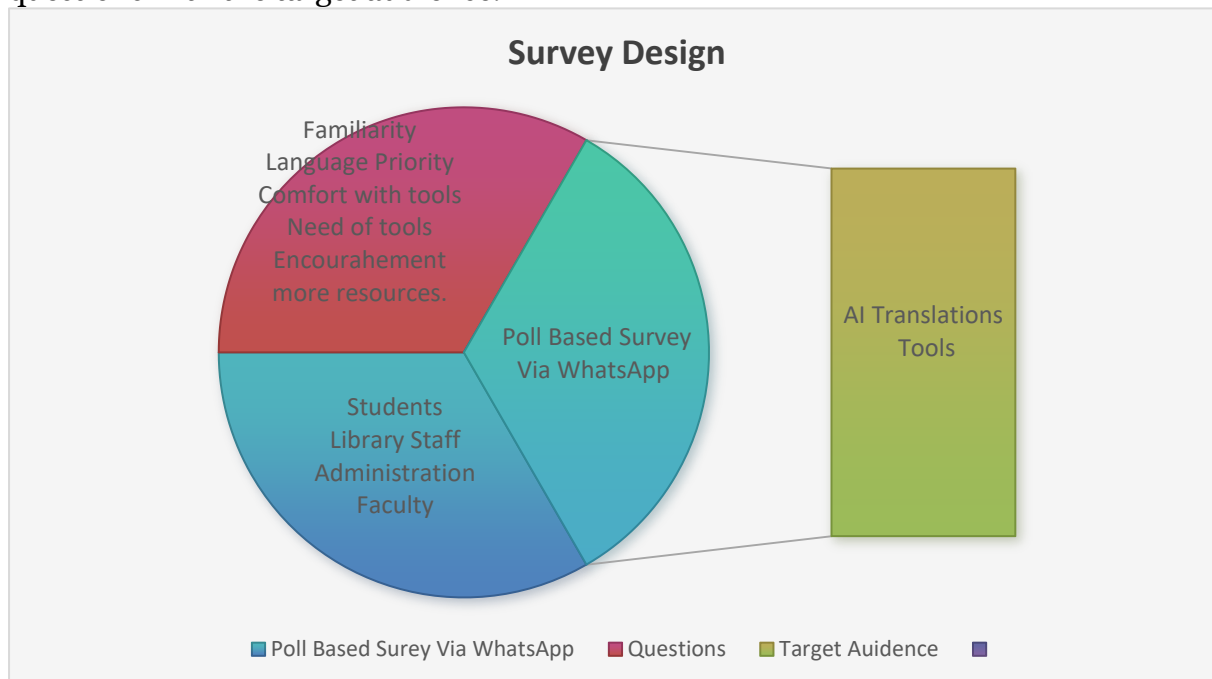
excellent environment for better understanding and in advance learning.AI translation tools speed up the understanding, learning and also provide real time support.AI translation tools grooms the educational content make it simple for institutions to create material and provide user in a easy way. In this way, AI translation tools lounge in modern libraries to improving the educational system on a global scale.

AI-translation tools enable patron of library to search catalog in their prefer language making collection more accessible easily. Libraries need to use AI translation tools to acquire, translate and provide foreign language books, journals and digital media into library user language to understand. AI live translation in libraries use for communication it facilitate multilingual communication during workshops, events and programs. Libraries use AI translation tools to translate different sign, instruction into multiple language for the non speakers. Libraries adopting these tools to provide there services globally accessible and meeting the needs of diverse communities.

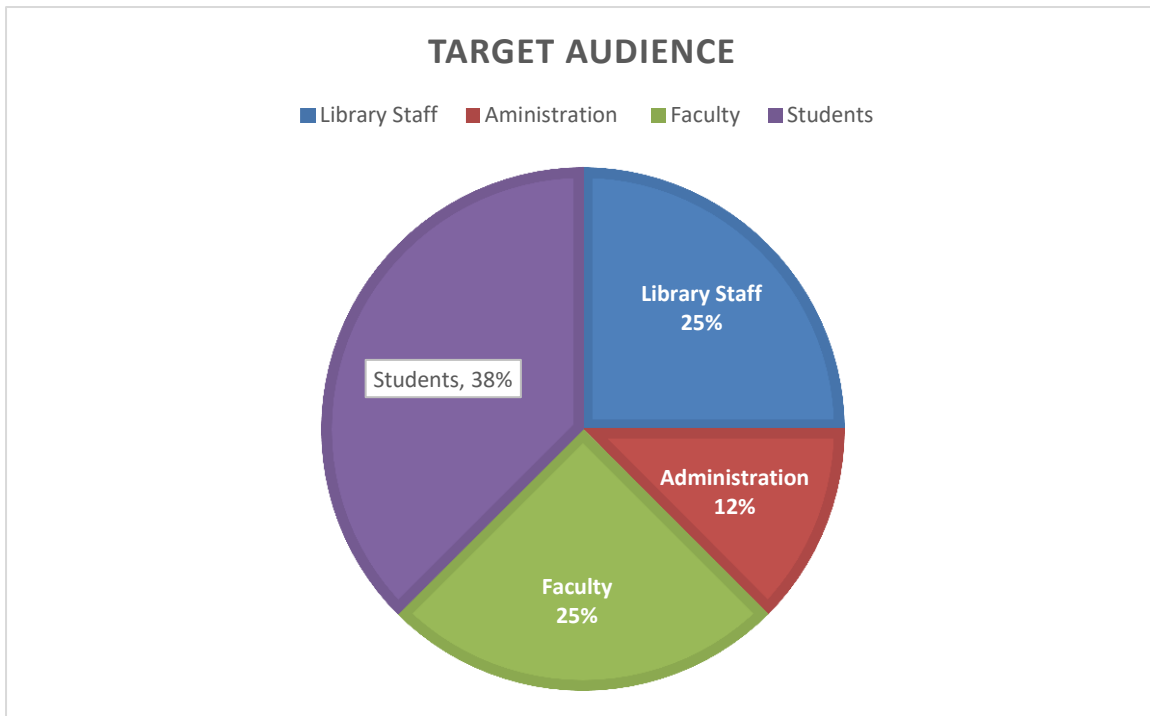## Methodology
Survey Design
A poll-based survey consisting of five question designed to address 5 different questions with the target audience.

This data can address language barriers and increase technological awareness among patrons.

Target Audience
The survey was conducted at the University of Sargodha.The participants are library staff, administration, faculty and students.The total of the 40 participants responded to the survey.

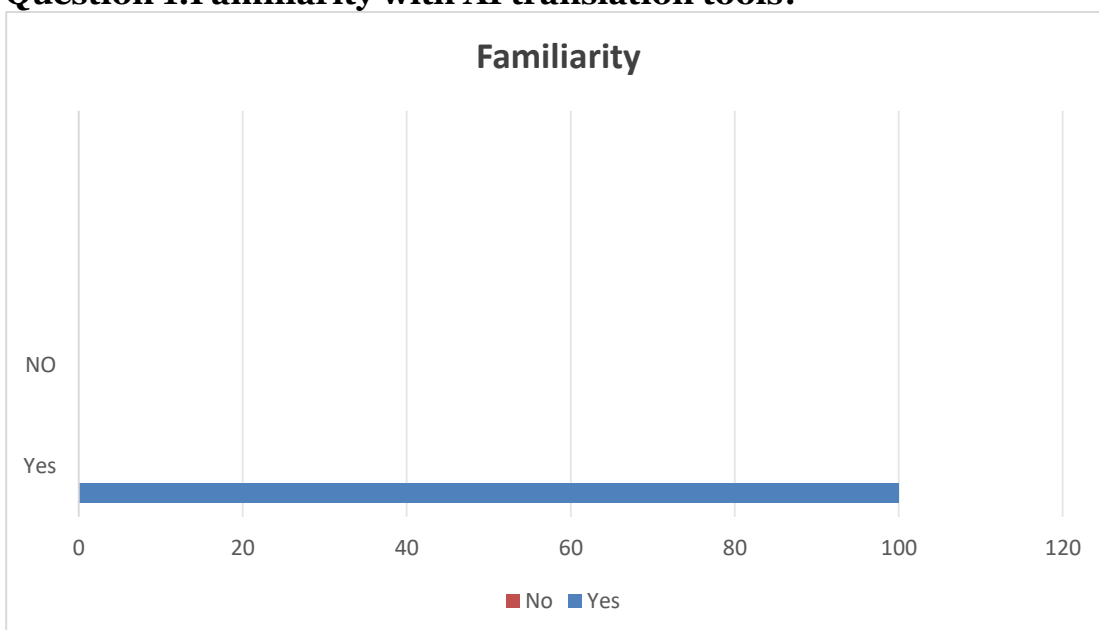TARGET AUDIENCE — Library Staff 25%, Administration 12%, Faculty 25%, Students 38%
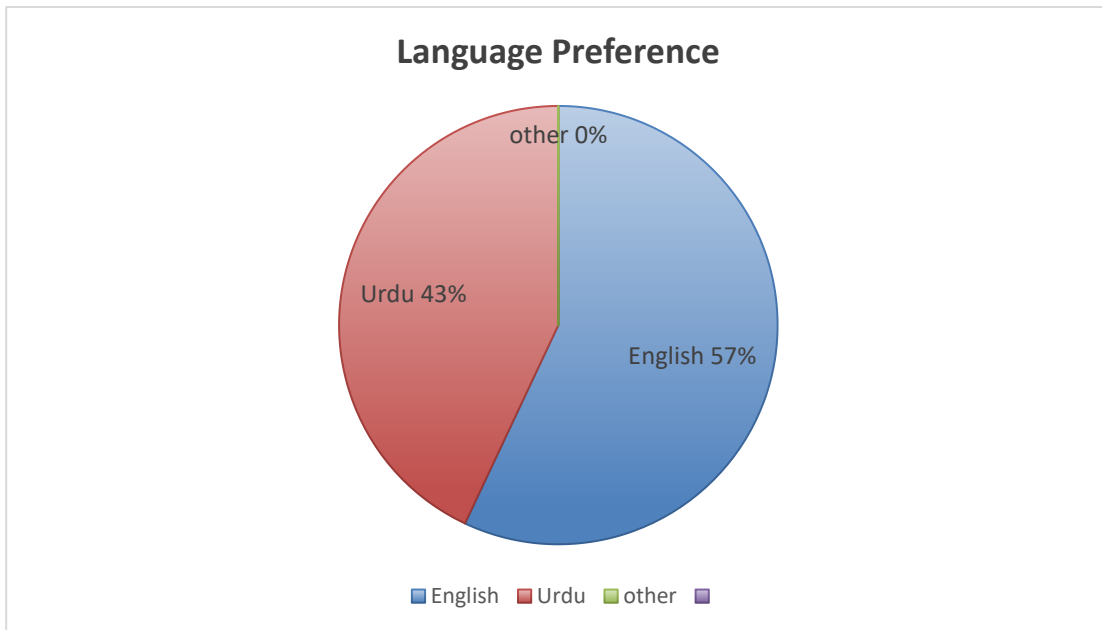
Data collection
- The survey was distributed via WhatsApp allowing 24 hours to respond.
- A poll format was used to ensure ease of participants and quick feedback.
- The anonymous nature of polls ensured unbiased responses .

Data Analysis
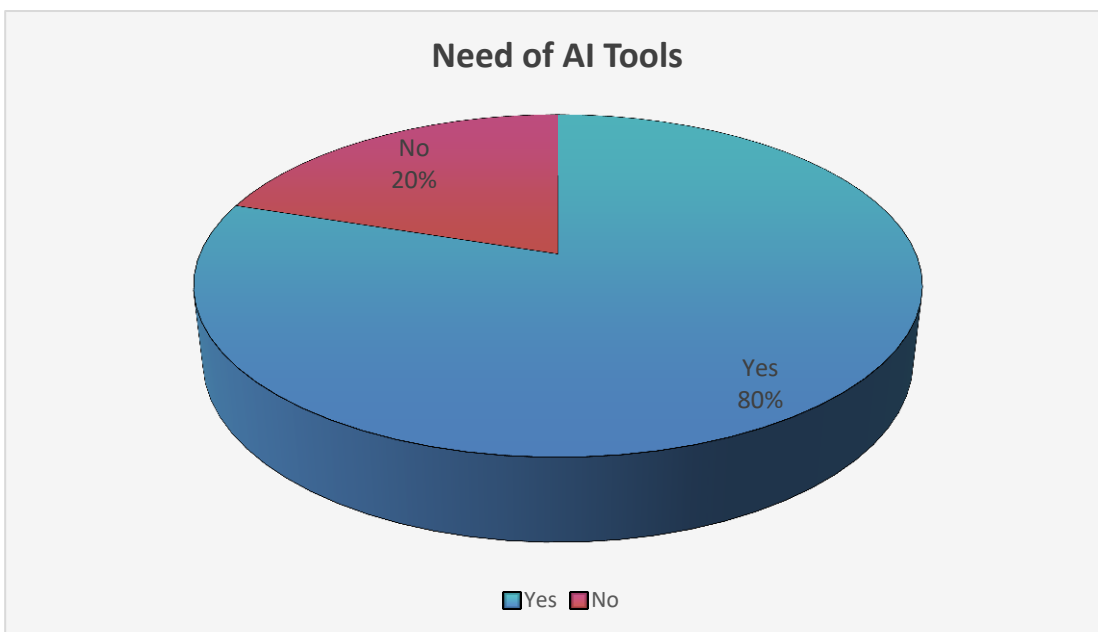
Question 1:Familiarity with AI translation tools?

Familiarity

Question 2:Language support priority in libraries?
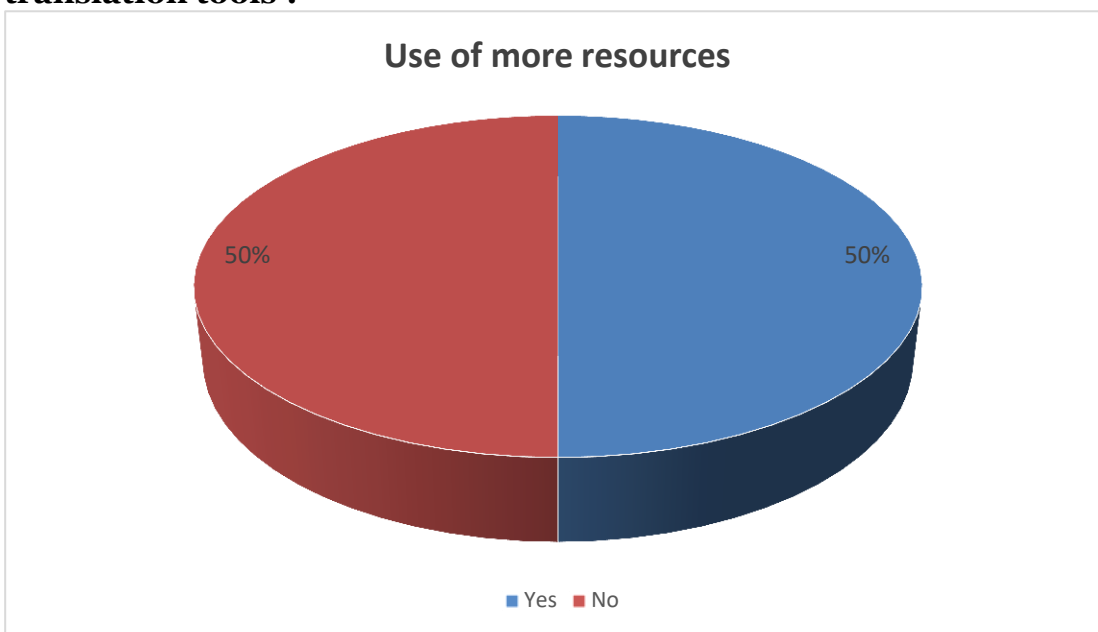
Language Preference

other 0%

Urdu 43%

English 57%

■ English ■ Urdu ■ other ■

Question 3 :Comfort with AI tools?

Comfort

■ Comfortable   ■ Not Comforable

Question 4: Need for library AI translation tools?

Need of AI Tools

No 20%

Yes 80%

Yes No

Question 5: Encouragement of use more library resources through AI translation tools ?

Use of more resources

50% 50%

Yes No

Survey Analysis

The findings show that the familiarity and comfort of AI translation tools are among patrons.The AI translation tools are beneficial, and their effective use could engage more library patrons with more use of library resource. Familiarity does mean optimal use of these tools library should address this gap by with workshops, campaigns and hands on training.The survey shows that English and Urdu are the most preferred languages. The need of AI translation tools in modern libraries increase library users interest in more use of resource of library. The library patron can understand any text of there

interest with there prefer language.With the high demand of these tool library has to tackle problem that happen during offers AI translation tool. The need of AI translation in the library are essential for the patron to get knowledge.

Challenges Identified
- Lack of awareness among patrons.
- Lack of training awareness.
- Limited expertise of AI translation tools in library Staff.
- Adoption of new technology.

Recommendations
- Conduct sessions workshops, seminars to raise awareness about AI-based tools among library patrons.
- Heir experts to guide patrons in using these tools effectively.
- Organize a social media campaign to promote these tools.
- Arrange outdoor camps for hands-on trials and demonstrations.

Conclusion
Technology is revolutionizing every aspect of life and libraries in particular. In modern libraries AI-based translation tools are essential for breaking language barriers expanding resource accessibility, and enabling equitable access for diverse language speakers.Patrons require awareness and training to maximize the effective use of the these tools.Mostly are comfortable using these tools ongoing support and education are necessary to bridge gaps in digital literacy.Urdu and English are prioritized languages for translation support,reflecting the linguistic needs of the target user base.High demand exist of these tools but challenges and implementation resolution still need to be addressed for widespread and efficient adoption.These tools not only expand accessibility but also position libraries as inclusion and equitable spaces for global learning.Libraries not only preserve their role as the hub of knowledge but also evolve into global gateways of learning.AI tools are going to be a future changing for modern libraries.

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