SOUTH EAST ASIAN INSTITUTE OF TECHNOLOGY, INC

HCI RESEARCH TITLE GUIDE

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ADVANCED HUMAN-COMPUTER INTERACTIONS

IDENTIFY YOUR FOCUS

Human-Computer Interaction (HCI) is a broad field that explores how people interact with technology. Selecting the right focus area for your research depends on your interests, the problems you want to solve, and the impact you want to make.

FOCUS AREAS

01 Usability & UX (User Experience) Design

Focus: Improving how users interact with digital interfaces (websites, apps, software, or devices).

💡 Key Questions

How can we simplify website navigation for users of all ages?
What design elements improve mobile app usability?
How does button placement affect user engagement?

🔍 Example Research Titles

"Improving E-Commerce Website Usability Through Adaptive UI Design"
"The Impact of Minimalist Design on Mobile App User Experience"
"User-Centered Design Strategies for Enhancing Software Accessibility"

FOCUS AREAS

02 Assistive Technologies

Focus: Designing technology that improves accessibility for individuals with disabilities or special needs.

💡 Key Questions

How can voice-controlled systems help visually impaired users?
Can gesture-based interfaces improve accessibility for people with mobility impairments?
What are the best UX practices for designing apps for people with dyslexia?

🔍 Example Research Titles

"Enhancing Web Accessibility for the Visually Impaired Through AI-Powered Screen Readers"
"Gesture-Based Interaction for Users with Motor Disabilities: A Usability Study"
"Designing Inclusive Mobile Apps: Improving Readability for Users with Dyslexia"

FOCUS AREAS

03 AI & Human Interaction

Focus: Understanding how users interact with artificial intelligence (AI) in digital environments, such as chatbots, voice assistants, and recommendation systems.

💡 Key Questions

How can AI chatbots enhance customer service interactions?
What are the usability challenges of voice assistants in non-native English speakers?
Can AI-driven UI personalization improve user retention in mobile apps?

🔍 Example Research Titles

"Improving Customer Engagement with AI-Powered Chatbots: A UX Study"
"The Usability of Voice Assistants for Non-Native English Speakers"
"Personalized UI Design: How AI Adapts Interfaces to User Behavior"

FOCUS AREAS

04

Virtual & Augmented Reality (VR/AR)

Focus: Investigating how immersive technologies impact learning, healthcare, gaming, and other fields.

💡 Key Questions

How effective is VR in training simulations compared to traditional methods?
Can augmented reality improve navigation for visually impaired users?
What is the impact of VR-based therapy on anxiety treatment?

🔍 Example Research Titles

"Enhancing Medical Training Through VR-Based Simulations: A User Experience Study"
"Exploring the Use of Augmented Reality for Indoor Navigation Assistance"
"The Effectiveness of VR Exposure Therapy for Anxiety Disorders"

FOCUS AREAS

04 Educational Technology

Focus: Exploring how interactive technologies can enhance learning experiences.

💡 Key Questions

How does gamification improve student engagement in e-learning platforms?
What is the impact of AI tutors on personalized learning?
Can VR improve comprehension in science education?

🔍 Example Research Titles

"Gamification in E-Learning: Enhancing Student Engagement Through Interactive UI"
"The Role of AI-Powered Chatbots in Personalized Learning Experiences"
"Using Virtual Reality to Enhance Science Education: A Case Study in High Schools"

DETERMINING YOUR RESEARCH PURPOSE IN HCI

Once you've chosen your focus area, the next step is to define what you want to achieve with your research. This helps in crafting a meaningful research title and structuring your study.

4 TYPES OF RESEARCH PURPOSE IN HCI

1. STUDYING USER BEHAVIOR

Goal: Understand how users interact with technology in real-world scenarios.

💡 KEY QUESTIONS

- How do users navigate a mobile app?
- What challenges do elderly users face when using touchscreens?
- How does screen time affect user attention and productivity?

🔍 EXAMPLE RESEARCH TITLES

- "Understanding User Behavior in Mobile Banking Apps: A Case Study on Senior Citizens"
- "How Gamified Interfaces Influence User Engagement in E-Learning Platforms"
- "Analyzing User Distraction Levels When Using Dark Mode vs. Light Mode in Reading Apps"

4 TYPES OF RESEARCH PURPOSE IN HCI

2. EVALUATING AN INTERFACE

Goal: Assess the usability, efficiency, or effectiveness of an existing system.

💡 KEY QUESTIONS

- Is this UI design user-friendly?
- Does a chatbot improve customer service satisfaction?
- Is VR training more effective than traditional methods?

🔍 EXAMPLE RESEARCH TITLES

- "Evaluating the Usability of AI-Powered Chatbots in Customer Support"
- "User Experience Analysis of Virtual Reality-Based Medical Training Simulations"
- "Assessing the Accessibility of E-Government Websites for People with Disabilities"

4 TYPES OF RESEARCH PURPOSE IN HCI

3. DEVELOPING A NEW INTERACTION MODEL

Goal: Design a new way for users to interact with technology.

💡 KEY QUESTIONS

- Can gestures replace traditional touch interfaces?
- How can voice commands improve accessibility for disabled users?
- Can AI-driven UI personalization improve user experience?

🔍 EXAMPLE RESEARCH TITLES

- "Designing a Gesture-Based Interface for Smart Home Control: A Usability Study"
- "Enhancing Accessibility Through AI-Powered Voice Navigation in Mobile Apps"
- "Developing a Personalized UI Framework for Adaptive E-Learning Platforms"

4 TYPES OF RESEARCH PURPOSE IN HCI

4. COMPARING DIFFERENT UI APPROACHES

Goal: Compare two or more UI designs to determine which is better for user experience.

💡 KEY QUESTIONS

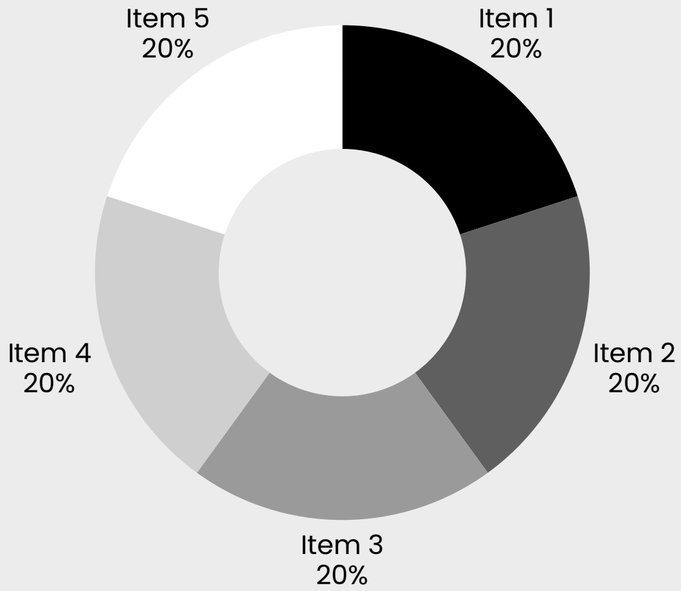
- Does dark mode improve readability compared to light mode?
- Which menu design leads to faster navigation: dropdowns or sidebars?
- Are voice assistants more effective than text-based chatbots?

🔍 EXAMPLE RESEARCH TITLES

- "Dark Mode vs. Light Mode: Which Enhances Reading Efficiency in Mobile Apps?"
- "Comparing Dropdown Menus and Sidebar Navigation for E-Commerce Websites"
- "Voice Assistants vs. Text-Based Chatbots: A Comparative Study on User Satisfaction"

CRAFTING A CLEAR AND ENGAGING HCI RESEARCH TITLE

A strong research title should be
Specific – Clearly state what your research is about.
Concise – Avoid unnecessary words while keeping it informative.
Engaging – Make it interesting and relevant.



KEY ELEMENTS OF A RESEARCH TITLE

TECHNOLOGY OR INTERFACE

What system, tool, or design are you studying?

- *Examples: Chatbots, Virtual Reality, Mobile Apps, Voice Assistants*

USER EXPERIENCE OR PERFORMANCE ASPECT

What are you measuring?

- *Examples: Usability, Engagement, Accessibility, Efficiency*

SPECIFIC GROUP OF USERS

Who is your target audience?

- *Examples: Elderly users, students, visually impaired individuals, gamers*

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THANK YOU

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