

What Fosters & Hinders Empathy in SE?

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01 Introduction

Billions of dollars are wasted each year on failed software projects.^{1,2}



Poor developer-user relationship is found to be a cause of project failures.^{1,2}



Involving users in software projects helps to enhance project success.³



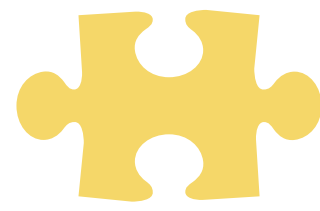
Human aspects help to overcome challenges in user involvement.⁴

02 Why Empathy?



Aids

understanding user involvement



A vital

competency in various fields



Limited

research in SE

03 Research Method

Based on a case study for the development of an eHealth app involving developers & end-users.

Data Collection

Empathy Test

Observation Study

Semi-Structured Interviews

Data Analysis

Socio-Technical Grounded Theory & Descriptive Statistics

04 Findings

Developers

Familiarity, Commonality, Reflection in action, User confusion, Appreciation.



Empathy Enablers

End Users

Appreciation, Understanding, Familiarity, Connection to app, Mode of communication.

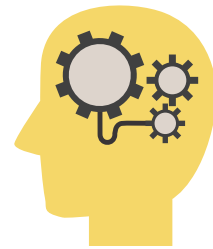
Less Interaction, Unfamiliarity, Reflection on action, Task-centeredness, Poor connection.



Empathy Barriers

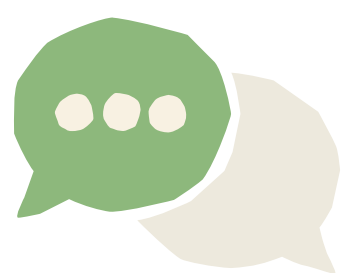
Nervousness, Poor connection, Confusion on terminology, Users feeling awkward.

More follow-up questions, Technical & Emotional support, Better preparation.



Strategies to overcome barriers

No changes. Everything was quite good & enjoyable.



Verbal

Empathy Cues

The most dominant cues:

Developers: Empathic conjectures & Empathic evocations

Users: Empathic conjectures & Empathic understanding responses

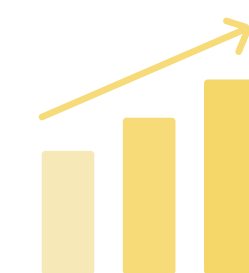


Non-Verbal Empathy Cues

The most dominant cues:

Developers: Nonverbal signals for attentive listening

Users: Sounds for attentive listening



Empathy Trends

Overall users have higher affective and cognitive empathy scores compared to developers.

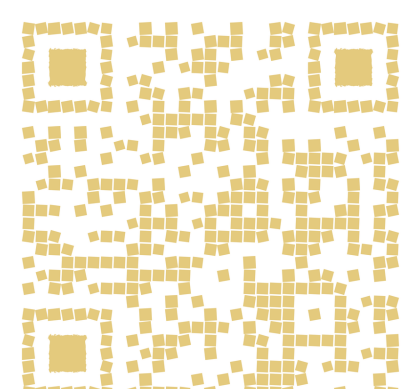
05 Contributions



How to manage empathy enablers & barriers



Recommendations for research & practice



Read our paper

06 References

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