Assumptions Checked: How Families Learn About and Use the Echo Dot

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Users of voice assistants often report that they fall into patterns of using their device for a limited set of interactions, like checking the weather and setting alarms. However, it's not clear if limited use is, in part, due to lack of learning about the device's functionality. We recruited 10 diverse families to participate in a one-month deployment study of the Echo Dot, enabling us to investigate: 1) which features families are aware of and engage with, and 2) how families explore, discover, and learn to use the Echo Dot. Through audio recordings of families' interactions with the device and pre- and post-deployment interviews, we find that families' breadth of use decreases steadily over time and that families learn about functionality through trial and error, asking the Echo Dot about itself, and through outside influencers such as friends and family. Formal outside learning influencers, such as manufacturer emails, are less influential. Drawing from diffusion of innovation theory, we describe how a home-based voice interface might be positioned as a near-peer to the user, and that by describing its own functionality using just-in-time learning, the home-based voice interface becomes a trustworthy learning influencer from which users can discover new functionalities.

CCS Concepts: • **Human-centered computing → Human computer interaction (HCI)**; *User studies, Field studies, Interaction techniques.*

Additional Key Words and Phrases: Voice interfaces, Smart Speakers, Digital Home Assistants, Learning

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1 INTRODUCTION

Despite over 100 million devices with a pre-installed Alexa voice interface sold [5], prior work has shown that users, particularly those who are not early adopters, do not use a wide range of the available functions of

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