Seize the Moment: An Exploratory Study to Identify Opportune Moments in Everyday Life to Promote Healthy Eating

1 Motivation
Communicating suggestions at the opportune moment can have greater persuasive power

Certain moments in everyday life can be more receptive for health/food suggestions

Smartphone technologies can help to personalize and contextualize receptive moments to suit individual needs

2 Goals
Find moments that are teachable or actionable

Classify teachable or actionable moments with sensor enabled mobile phones

Determine which media is appropriate for which moments

3 Study Methods

4 Prototype and Results

Prototype
✓ Custom software was developed for Android smartphones
✓ User could self-initiate messages or receive them after being prompted by phone vibration

Pilot study
✓ 8 graduate students participated in the pilot
✓ Each participant carried the phone for 7 days
✓ Messages were randomly prompted multiple times per day (15-45 minute intervals)

Initial findings
Most suitable teachable moments
✓ Full chunks of time: mornings, meal times, some time before going to bed
✓ In-between times: commuting, between classes

Subtle reminders are better
✓ Reminders should be subtle in order not to interrupt concentration or cognitive effort

Context determines the optimal media
✓ Text with an illustrative image worked best in mobile situations or during small breaks
✓ Audio/video had more impact, but required more time and privacy

User-initiated vs. System-generated learning
✓ More time and attention was allocated on the messages when learning was user-initiated

5 Conclusions and Future work
Opportune moments can be identified based on mobile phone sensors
✓ Initial training period to collect information
✓ Messages could be tailored to fit mental, physical and social context, once patterns are identified

Impact of contextualized messages on behaviour?
✓ Longer studies with larger sample sizes needed to assess the impact on knowledge and behaviour

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