# Working Together

Collaboration of CS4760, HU4642, CS5760

Wei Zhang PhD candidate, Applied Cognitive Science and Human Factors

### Collaborations in Software Development



#### **Course Stakeholder Network**



## Problems

What programmers say:



Team conflicts	CS students	STC students
Interpersonal conflicts	<ol> <li>Need more communication.</li> <li>Need a leader.</li> <li>Some of the teammates did not work a lot.</li> <li>Split the work more evenly.</li> <li>Develop more defined roles for each team member.</li> </ol>	<ol> <li>Need more communication.</li> <li>Need a leader.</li> <li>Keep the CS and STC students on the same page.</li> <li>CS students did not see the importance of documents from STC students</li> <li>CS students would not show up or speak in the meetings.</li> <li>The clash of personalities between CS and STC members.</li> </ol>
Task conflicts	<ol> <li>Better delegation of tasks.</li> <li>More time to apply changes from feedback.</li> <li>More time to learn Android development.</li> <li>Earlier development.</li> <li>Disagreement on app design.</li> </ol>	<ol> <li>Lack of clear expectations on what was to be used in the help documentation.</li> </ol>

Team conflicts	CS students	STC students
Interpersonal conflicts	<ol> <li>Need more communication.</li> <li>Need a leader.</li> <li>Some of the teammates did not work a lot.</li> <li>Split the work more evenly.</li> <li>Develop more defined roles for each team member.</li> </ol>	<ol> <li>Need more communication.</li> <li>Need a leader.</li> <li>Keep the CS and STC students on the same page.</li> <li>CS students did not see the importance of documents from STC students</li> <li>CS students would not show up or speak in the meetings.</li> <li>The clash of personalities between CS and STC members.</li> </ol>
Task conflicts	<ol> <li>Better delegation of tasks.</li> <li>More time to apply changes from feedback.</li> <li>More time to learn Android development.</li> <li>Earlier development.</li> <li>Disagreement on app design.</li> </ol>	1.Lack of clear expectations on what was to be used in the help documentation.

Team conflicts	CS students	STC students
Interpersonal conflicts	<ol> <li>Need more communication.</li> <li>Need a leader.</li> <li>Some of the teammates did not work a lot.</li> <li>Split the work more evenly.</li> <li>Develop more defined roles for each team member.</li> </ol>	<ol> <li>Need more communication.</li> <li>Need a leader.</li> <li>Keep the CS and STC students on the same page.</li> <li>CS students did not see the importance of documents from STC students</li> <li>CS students would not show up or speak in the meetings.</li> <li>The clash of personalities between CS and STC members.</li> </ol>
Task conflicts	<ol> <li>Better delegation of tasks.</li> <li>More time to apply changes from feedback.</li> <li>More time to learn Android development.</li> <li>Earlier development.</li> <li>Disagreement on app design.</li> </ol>	<ol> <li>Lack of clear expectations on what was to be used in the help documentation.</li> </ol>

Team conflicts	CS students	STC students
Interpersonal conflicts	<ol> <li>Need more communication.</li> <li>Need a leader.</li> <li>Some of the teammates did not work a lot.</li> <li>Split the work more evenly.</li> <li>Develop more defined roles for each team member.</li> </ol>	<ol> <li>Need more communication.</li> <li>Need a leader.</li> <li>Keep the CS and STC students on the same page.</li> <li>CS students did not see the importance of documents from STC students</li> <li>CS students would not show up or speak in the meetings.</li> <li>The clash of personalities between CS and STC members.</li> </ol>
Task conflicts	<ol> <li>Better delegation of tasks.</li> <li>More time to apply changes from feedback.</li> <li>More time to learn Android development.</li> <li>Earlier development.</li> <li>Disagreement on app design.</li> </ol>	1.Lack of clear expectations on what was to be used in the help documentation.



#### What is a team?

- Social entities composed of members with high task interdependency and shared common goals (Dyer, 1984).
- A group of people with different specialties linked in a common purpose.

Common purpose/shared goals:

Develop app

Complete the course

Teamwork: team members integrate and share information, coordinate and cooperate as task demands shift so as to complete their mission.

#### What is a team?

- Social entities composed of members with high task interdependency and shared common goals (Dyer, 1984).
- A group of people with different specialities linked in a common purpose.

Common purpose/shared goals:

- Develop the app
- Complete the course

Teamwork: team members integrate and share information, coordinate and cooperate as task demands shift so as to complete their mission.

#### What is a team?

- Social entities composed of members with high task interdependency and shared common goals (Dyer, 1984).
- A group of people with different specialities linked in a common purpose.



Teamwork: team members integrate and share information, coordinate and cooperate as task demands shift so as to complete their mission.

# What are the factors that influence your team collaboration?

- Time constraint
- Communication
- Task coordination
- Awareness of the contribution from the other discipline
- Personalities

## Team Building Techniques

- Getting to know each other
- Create shared/common goals
- Build a team structure
- Develop a team process

#### Getting to know each other:

- Know your team member's name
- Know what each person is good at
- Find a role for yourself and others in the team

Shared/Common Goals:

- Project goal: what are you ultimately trying to accomplish?
- Course goal: get an A or comfortable workload?
- Write a team vision statement

#### **Building a Team Structure**

Smaller team have team leaders.

Team leader roles:

- Organize and lead meetings
- Split the project into tasks
- Monitor the project and Keep team members on track
- Monitor the team process and improve the process

Team Processes:

- Communication: Meetings & Emails
  - Email: subject line, responsiveness
  - Meeting: Define meeting goals
  - Tasking more appropriate during meetings
  - Difficulties and seeking help
  - Work jams for getting the project done.
- Monitoring Progress
  - Development timeline
  - Burnt down chart

#### **Team Process**

- Communication: Meetings & Emails
  - Email subject line
  - Meeting goals
  - Tasking
  - Difficulties
- Progress



- Burnt down chart
- Development timeline