Workflow Mapping

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Abstract

Explored Dr. Enrico Gandolfi's extensive research on the development of cooperative and computational thinking in gaming contexts by conducting comprehensive interviews and meticulously reviewing his published works.

Through this process, a detailed workflow map was meticulously constructed, offering a visual representation of the intricate research methodology. This visual aid serves as a powerful tool for enhancing communication and efficiency across various departments and groups, enabling a deeper understanding and dissemination of the research process.
Research Overview of Dr. Gandolfi

Dr. Enrico Gandolfi's study *You have got a (different) friend in me: Asymmetrical roles in gaming as potential ambassadors of computational and cooperative thinking* explores the ideas of cooperative and computational thinking within the context of online gaming. Surveying over 1400 participants, the aim is to understand the dynamics at play in collaborative challenges. The findings identify key factors that enhance teamwork, and reveal the correlation between cognitive processes. The study outlines implications for education, offering insights into design strategies that can be applied in practice. Ultimately, this research provides valuable contributions to both academia and practical applications.
What game features and dynamics influence COT and CT in playing AAAs?

Report is sent to Journals

Journals approve

Publish

Revise Report

NO

YES
## Snapshots

<table>
<thead>
<tr>
<th>Computational</th>
<th>Human</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>A computational element performs tasks like calculations or decision-making within a system.</td>
<td>A human element refers to the aspect of a system or process that involves human interaction, input, or influence.</td>
<td>A data element refers to a specific piece of data within a dataset or system, such as a single value, attribute, or variable.</td>
</tr>
</tbody>
</table>

- **Computational**: 6 Elements  
  Two specialized programs are required to analyze responses, as well as the three games and the forum.

- **Human**: 16 Elements  
  Most of the steps can be completed using a web browser, or through the computational steps.

- **Data**: 16 Elements  
  The majority of data elements are found in the survey, along with the survey itself and the report.
<table>
<thead>
<tr>
<th>Item (X refers to the game targeted)</th>
<th>Type of feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. When did you start to play X?</td>
<td>One choice depending on X</td>
</tr>
<tr>
<td>3. You play X on</td>
<td>One choice among: PC/XOne/PS4</td>
</tr>
<tr>
<td>4. Please report your level and achievements in X</td>
<td>Text entry</td>
</tr>
<tr>
<td>5. What is your favorite multiplayer mode?</td>
<td>One choice depending on X</td>
</tr>
<tr>
<td>6. What is your favorite operator/role?</td>
<td>Text entry</td>
</tr>
<tr>
<td>7. If you have favorite weapons and/or maps in X, please write them below:</td>
<td>Text entry</td>
</tr>
<tr>
<td>8. Please tell me how often you:</td>
<td>1–4 Likert Scale (never, rarely, sometimes, often)</td>
</tr>
<tr>
<td>• play X with friends met in playing the game</td>
<td></td>
</tr>
<tr>
<td>• play X with friends met outside the game</td>
<td></td>
</tr>
<tr>
<td>• play X without friends (random mates)</td>
<td></td>
</tr>
</tbody>
</table>
Process

To begin this project, I reached out to several faculty members that produce research at Kent State. After I found a professor willing to work with me for the project, Dr. Enrico Gandolfi, I met with him to get an understanding of the process of his research. Following the meeting I reviewed the papers he has published to fill in some of the details of his work. I then created a spreadsheet to organize the data. Based on that sheet I was able to create the workflow map, along with snapshots that help to explain his work.
Challenges

One of the most challenging parts of this process for me was at the beginning. I was assigned to professors at my university to interview and create a workflow map. It was challenging to get in contact with them, and I was limited in what I could do without being able to interview. Eventually I was able to meet with Dr. Gandolfi and begin working, but I think the project could have been improved if I hadn’t lost that time.
Benefits

Workflow mapping helps researchers communicate and collaborate better within academia. By visually laying out the steps and connections in a project, it brings clarity and transparency to the research team. This not only improves internal communication but also makes it easier to engage with external partners like funders and other departments. It also helps researchers share the importance of their work with a broader audience, making sure their efforts have maximum impact.
References


My data spreadsheet:
https://docs.google.com/spreadsheets/d/1iw1xTLDI9NtLO-SpuLm6XKcwnpyT2h0_16bo1nAC-Qw/edit?usp=sharing