Pocket Assistant for player research
“You can make an amazing game but you can’t make a success. Your players make the success”

Imre Jele, co-founder of Bossa Studios
Sense.Vision is a company that specializes in playtests and player research. The scope of our research goes from playtesting specific games to analyzing target audiences and market trends.

**Target audience (TA)**

Players on whose interest and monetization the game is aimed at. TA is usually defined by five main parameters (this list is flexible and can change depending on the game):

- age;
- gender;
- preferred gaming devices;
- game preferences;
- gaming experience (casual, midcore or hardcore).

**Players that are not allowed to participate in playtests**

Players who are outside of the target audience as well as players who have education or a job in marketing research, sociology, psychology, game journalism, game and app development, other specialists of gaming industry because of modified perception. Friends, family and colleagues are not acceptable as well - they will always be biased towards your product.

**Universe**

The term universe is used in sociology to denote whatever group of people that is being studied. In our case these are all players of a defined game, genre, platform, location depending on the research. Target audience of the game usually is the universe.

**Sample**

A part, micromodel of the universe that is going to be observed (takes part in research).

**Research types**

Research can be split into two categories: qualitative and quantitative. The main difference between them is the type of collected data. They also differ in research goals, data collection methods and the number of observations during the research.
Qualitative research:

- The goal is to learn emotional and behavioral reactions, deeper motivation of behavior and perception
- Question “How does the player behave? Why?”
- Data is not formalized
- Data in the form of transcripts, recordings, observations
- 10-50 participants

Quantitative research:

- The goal is to get numerical estimates
- Data is highly formalized and well structured
- Data is mostly in spreadsheets
- Question “How many?”
- 200+ participants (in some rare cases — 50+)

Measurement error:

Online-calculator for measurement error:
http://www.surveysystem.com/sscalc.htm

<table>
<thead>
<tr>
<th>Number of players</th>
<th>Measurement error (P=95%*)</th>
<th>Number of players</th>
<th>Measurement error (P=95%*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>±19.5%</td>
<td>200</td>
<td>±6.9%</td>
</tr>
<tr>
<td>50</td>
<td>±13.8%</td>
<td>300</td>
<td>±5.7%</td>
</tr>
<tr>
<td>75</td>
<td>±11.3%</td>
<td>400</td>
<td>±4.9%</td>
</tr>
<tr>
<td>100</td>
<td>±9.8%</td>
<td>800</td>
<td>±3.5%</td>
</tr>
<tr>
<td>150</td>
<td>±8.0%</td>
<td>1000</td>
<td>±3.1%</td>
</tr>
</tbody>
</table>

*P — confidence level. Confidence level of 95% means that in case of repeated independent experiments only in 5% of cases the result may go beyond measurement error interval.

A value of the error can vary depending on the size of the universe, but only in case of small universe (up to 10,000 people).
Playtest is a user test of the game with real players. Playtest participants should be members of the target audience who are chosen based on defined beforehand parameters (quotas). Playtest is conducted using project materials: marketing materials, screenshots, prototype, alpha, beta or release version of the game.

Playtest possible goals:
- first time user experience (FTUE);
- game tutorial and how well the player understands core game mechanics after tutorial completion;
- main problems with controls and interface;
- how fun the gameplay is and the perception of the game balance (how much time the player is in the flow);
- evaluate the potential for retention and monetization.

Playtest restrictions as a research method:
- Project goal must be defined before its start. It may be in the form of an answer to the question “What decisions should be made based on the data that will be received?”.
- Player participation time should be limited to 2 hours for one play session. It is allowed to split the project in subgroups with different methodology or to make a several days project if it is necessary.
- Don’t shuffle the roles. The developer designs the game, the player evaluates it. Never the other way around. The feedback players provide should be used by the developer team as indication of problematic areas but not as a to-do-list. It is often difficult or impossible to implement changes the way players formulate them. Players are not game designers and cannot foresee how their suggestions might influence the whole game.
- Measure only things that users formed experience with.
- Cooldown. Playtest participants can take part in other projects not earlier than 6 months after their participation in any marketing research, including the playtest. You should also not playtest the same content after redesign with the same people because they will have different perception compared to new users.
<table>
<thead>
<tr>
<th>Subject of interest</th>
<th>Recommended sample, respondents</th>
<th>Recommended duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing materials</td>
<td></td>
<td>25 50 75+</td>
</tr>
<tr>
<td>Expectations formed by icon and name of the game in app store (game genre, mechanics, target audience of the game). Desire to install the game, icon on the device compared to others ((easy to find, outstanding from others, etc). Expectations formed by screenshots (game genre, idea of the gameplay, story, target audience of the game).</td>
<td></td>
<td>1 day 7 days</td>
</tr>
<tr>
<td>Tutorial</td>
<td></td>
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<tr>
<td>Ease, clearance, usefulness from the first try; after desirable number of walkthroughs.</td>
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<td></td>
</tr>
<tr>
<td>Gameplay</td>
<td></td>
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<tr>
<td>Idea of the game; game mechanics, game goals; emotions; understanding of the game goals; understanding of the progress.</td>
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<td></td>
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<tr>
<td>Game balance</td>
<td></td>
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<tr>
<td>Balance of levels, characteristics and behaviour of character(s); game hints; speed; hardcoreness.</td>
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<td></td>
</tr>
<tr>
<td>Controls</td>
<td></td>
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<tr>
<td>Game control logic ease, obviousness; ease of learning control methods; convenience of game controls location for preferable grip and device position; accuracy; feedback; tension on the controls; sufficient control range; understanding of symbol designations.</td>
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<tr>
<td>Navigation, UI</td>
<td></td>
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<tr>
<td>Menu structure obviousness, location of the sub menu items; obviousness and visibility of indicators; easiness to read indicators;</td>
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<tr>
<td>Setting, art and sound</td>
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<tr>
<td>Setting idea; maps; backgrounds; characters; pointers; signs; indicators; menu; splash screens; sound; special effects; correspondence of style to the TA expectations.</td>
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<tr>
<td>Retention (estimation)</td>
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<tr>
<td>Retention estimation for the first 7 days by monitoring willingness to continue playing the game, exceeding the minimal daily time limit, perception of the core game parameters.</td>
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<tr>
<td>Monetization</td>
<td></td>
<td></td>
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<tr>
<td>Evaluation of in-game store usage (navigation convenience, store entering, purchase convenience; clearness of goods purpose, differences among goods, attractiveness of the goods (outer look, description).</td>
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<tr>
<td>Monetization</td>
<td></td>
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<tr>
<td>Evaluation of the monetization call to action (appearing in time, relevant, clear and attractive offer).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monetization</td>
<td></td>
<td></td>
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<tr>
<td>Purchase expectations (evaluation of purchases good usage experience, expectations and experience correlation, effectiveness of the purchase usage; satisfaction from the purchase, desired changes of the purchase characteristics).</td>
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<tr>
<td>Monetization</td>
<td></td>
<td></td>
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<tr>
<td>Perception of the game selling price.</td>
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<tr>
<td>A/B test</td>
<td></td>
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</tr>
<tr>
<td>Choosing the best model of controls, graphics, navigation, sounds and so on from several options (up to 5 options; not less than 50 people per option).</td>
<td></td>
<td></td>
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<tr>
<td>TA evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender, age, reference games</td>
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</tr>
</tbody>
</table>
Methods of data collection

In order to get the most out of a playtest you need to choose the data collection method you will use beforehand. Each data collection method has its advantages and restrictions.

Category: Surveys

Data is collected in the form of judgements and assessments from representatives of target audience or experts.

Questionnaires (method)

How it is conducted

Respondents fill in a questionnaire that contains open-ended and closed-ended questions.

What it does

Allow to collect full and structured information from players by asking every participant the same list of questions.

General rules for drawing up a questionnaire:

- General-to-Specific. Each topic begins from general questions and is then broadened by more specific ones.
- Closed questions dominate. They have a limited number of possible answers and allow to get an accurate assessment and compare different participants with each other.
- Each block ends with an open-ended question. It allows to get additional explanations.
- Player impressions change and replace each other during the game that is why measurements should be made a few of times during the game session.
### Example of a questionnaire structure:

<table>
<thead>
<tr>
<th>Game session time</th>
<th>Stage of forming experience</th>
<th>What to ask</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 minutes</td>
<td>Absent</td>
<td>Respondent’s data (surname, name, gender, age, game preferences etc.).</td>
</tr>
<tr>
<td>0 minutes</td>
<td>Expectations formed by marketing materials</td>
<td>Impressions of the icon, name of the game, description at the store, screenshots, video. Expectations about the game and its target audience. Desire to install the game and begin to play,</td>
</tr>
<tr>
<td>2 minutes</td>
<td>First impression (optional)</td>
<td>First impression of the game (what the game is about). Whether the gamer understands the goals of the level and controls. Desire to continue the game.</td>
</tr>
<tr>
<td>10 minutes</td>
<td>First experience (tutorial completion)</td>
<td>Tutorial evaluation. Understanding of the game goals and core game mechanics after completing the tutorial. Comfort of controls and interface. Desire to continue the game.</td>
</tr>
<tr>
<td>30 minutes</td>
<td>Considerable experience (optional)</td>
<td>Evaluations of core game mechanics (fun, difficulty, pace). Convenience of menu, interface and different control techniques. Adjustment to controls and UI. Desire to continue the game.</td>
</tr>
<tr>
<td>60 minutes</td>
<td>Full experience</td>
<td>General rating of the game, its strengths and weaknesses in player’s opinion. Final gameplay evaluation (fun, difficulty balance, pace). Depth of game mechanics. Progression system and satisfaction with current progression. Graphics and sound. Evaluation of storyline, dialogues and characters. General suggestions and ideas. Desire to recommend, compete and come back to the game.</td>
</tr>
</tbody>
</table>
How to process data

Open-ended questions are encoded and come down to formalized and restricted set of options. The set of possible options is finite and is determined at the beginning or during the data processing.

Closed-ended questions are visualized by graphics. Interrelations between data are analyzed and conclusions are made.

Restrictions

- No possibility to ask a clarifying question to identify the underlying motives of the player.
- No more than 50 questions excluding questions about personal data of the player.

In-depth interviews face–to–face (method)

How it is conducted

Private conversation according to a previously prepared form with questions that allows to ask clarifying questions.

What it does

Identifying the underlying motives of the player, including directly in the moment during gameplay.

How to process data

Analysis of answers summary is conducted via determination of general tends, opinions shared by the majority of the respondents and differences in their opinions. Special attention is given to detecting causes of the players actions and their motivation.

Restrictions

- A lot of not structured information
- A result depends on the level of interviewer’s preparation
Expert interview face-to-face (method)

How it is conducted
Private conversation according to a previously prepared plan of conversation with an expert in a specific area.

What it does
An ability to get an assessment of the game and its perspectives based on the professional experience from a competent specialist of a specific market, platform or genre. Expert is a hub of knowledge that can significantly save time and help avoid a large number of already known mistakes.

How to process data
Analysis of answers is conducted via determination of general trends, opinions, and differences in opinions. Special attention is paid to facts, experience and other information that can be used during development and product launch..

Restrictions
- Subjective nature of the information received
- Low probability of forming a breakthrough solution

Focused group interview (method)

How it is conducted
A group conversation of 6-10 representatives of target audience with elements of discussion under the supervision of a moderator according to a previously designed discussion plan (guide). FGI usually lasts for 1-2 hours and should be recorded. Moderator channels the discussion and makes all participants feel equal during the conversation, forcing more passive ones to speak and holding down the most active of them with the help of personal questions and giving word to some participants at certain points.
What it does

An ability of wide and deep research of the question at hand with formulating explanations, scripts and models by members of the target audience itself. The discussion is aimed at finding the ways users form experience with the product (game), criterias for choosing a game, attitude towards various game mechanics, reference groups, information channels, places, devices and conditions of the game process, perception of the best and the worst game in category etc.

How to process the data

The video is transcribed with marking each speaker. The transcript is then processed as in-depth interview answers. Special attention is given to the summary of collective discussion, consensus of player opinions regarding any specific problem is the most valuable.

Restrictions

- A lot of unstructured information
- There is a chance of conforming to a group opinion of certain participants. Such players can be uncomfortable with expressing their own view which differs from the view of others
- The result heavily depends on the moderator qualification.

Category: Observation

The time, the fact, the nature of events of interest, the external reactions of the target audience are being recorded while observing from the side (non-participant observation), or incognito as one of the participants (participant observation).

Thinking aloud (method)

How it is conducted

Audio and videorecording of thoughts, assessments, judgments, decisions, expressions during the game session.
What it does
Great feedback at the moment of forming experience. It is used as a backup method to determine the location of the problem if other methods have failed.

How to process data
Video recording is transcribed and players reaction on certain events in the game are analyzed.

Restrictions
Perception and often formulated solutions are distorted and are not good for analysis compared to usual game session because of strong pressure on the respondent. The problem is located for the further research with the other methods.

Video recording (method)

How it is conducted
Parallel recording of the screen of the gaming device, controllers and the respondent's face.

What it does
Allows to analyze the gameplay, behaviour in important situations, and to define generators of positive and negative emotions in the game.

How to process data
Video recordings are going through transcription — a verbal description of the important for the analysis events with time-code for each videorecording.

Restrictions
- Special hardware is required
- Gives the information about the strongest emotions, weaker emotions are not appearing because of the high concentration of the player
Non-participant observation (method)

How it is conducted

The observer records reactions and observations during the game session in a prepared form. Time, game situation and players reactions are recorded.

What it does

Recording of external reactions during the game session: body position, the intensity of interaction with the game, comments, behavior at the key points (win, loss, unlock, etc.).

How to process data

Players behavior during playing the game is formalized using definite set of parameters. Player behavior patterns are detected.

Restrictions

- It takes time to adapt to the presence of an observer, otherwise it may affect the player’s behavior
- Emotional reactions can pass through the inner filtration that cause unnatural or moderate reactions during the game moments

Participant observation (method)

How it goes

A researcher is involved in the project with the players incognito, as a player, and performs the same script. When the group of players end their participation, observer immediately writes down his observations in a prepared blank.

What it gives

Possibility of getting new insights and better understanding of players subculture during partially controlled conversations with the representatives of the TA. It allows for maximum sincerity of players.
How to process data
The same way as not-participant observation analysis.

Restrictions

Because of lack of formalization incomplete data collection as well partial or total disruption of the monitoring conditions when the observer is exposed are possible.

Category: Experiment

Studying the change of the parameter of interest in connection with the changes in other, tested parameters.

A/B (split) test (method)

How it is conducted

The sample is divided into equal parts according to the number of study options. If time allows it is desirable to introduce each respondent to each option in a specific order. Within each subgroup the order of options is unique (rotation of options). Each option should be presented at each point of order the equal number of times (helps to avoid the accumulation of experience during the research).

What it gives

Allows to compare the options of the specific solutions game mechanics, control model, art, titles, etc.

How to process data

The quantitative indicators are compared for each of the options.

Restrictions

- No more than 5 options for comparison
- Requires large sample for statistical significance
The key questions for the playtest

These questions can be used as a questionnaire or a plan of conversation with a player.

Be nice with a player, ask clarifying questions and you will receive great data to analyze.

Additionally a questionnaire can be developed according to the goals of the research. Do not overload the questionnaire, is should include no more than 50-60 questions, only 5-10 of which are open, other questions are formalized (multiple choice, scales, etc.).

1. Please, rate the game overall. Do you want to continue playing it?
2. Describe your overall impression of the game. What did you like about the game? What did you dislike about the game?
3. Was there something unclear for you in the game? What information should be included in the tutorial to avoid such situations?
4. Describe your impressions of the gameplay. Which moments of the game did you enjoy the most? What impeded you from enjoying the game or caused irritation?
5. What was missing from the game? What could make the game more fun for you?
6. Did you have any problems with controls? Were all the elements of controls comfortable for you to use? If not, describe what inconveniences you had.
7. Please, rate the graphics/sounds in the game overall. What did you like/dislike about the game’s art? What would you like to be changed?
8. Would you recommend this game to your friends/acquaintances? If yes, to whom and why? If no, what should be changed in the game so you could recommend it?
Have successful projects!
Or order them in Sense.Vision

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