**Sample characteristics and data**

| **Indicator** | **Data** |
| --- | --- |
| Number of students | 17 |
| Number of focus groups | 2 |
| Number of participants in the first focus group | 11 |
| Number of participants in the second focus group | 6 |
| Number of completed "quick surveys" | 17 (analyzed in Excel file "Quick survey and keywords") |
| Number of completed group projects on "If I were creating a digital resource I would design it..." | 4 group projects |
| Number of completed final survey forms (TechWell) | 17 (handwritten, scanned and analyzed 5 questions each) |
| Types of data collected | - Quantitative: closed-ended questionnaires (checkboxes)- Qualitative: free responses and handwritten notes- Visual: keywords, associations, emotional responses |
| Timing of collection | July 2025 |
| Age/grade | Grade 11 students from Sofia |

**Methods used**

* Quick survey - to establish initial emotional attitudes towards digital learning;
* Focus group discussion - to deepen understanding of digital wellbeing;
* Final survey - structured around 5 questions with scope for quantitative and qualitative interpretation;
* Keyword analysis and handwritten comments - to identify student attitudes and recommendations.

**AXIS ANALYSIS**

**Emotional experience**

* From the quick survey:
  + 15/17 noted that they felt **"comfortable"** in the digital environment.
  + Keywords*: relaxation*, *time saving*, *better concentration* but *lack of human contact*, *inferiority*.
  + Expressed **ambivalence** - positive attitude but with clear awareness of **gaps and challenges**.
* Question 2 of the final survey:
  + **9 students** indicated that they felt **"at ease"** online.
  + **7** noted **"overwhelm"**, **5 "boredom"**, **3 "confusion"**.
  + Only **1 student** noted **"motivation and inspiration"**.

The online environment creates a feeling of **less stress**, **better time allocation**, but **does not lead to inspiration**. Some students are **passive users** rather than active participants. Although most students feel relaxed, a significant proportion feel overwhelmed, bored or confused. Motivation is low. This points to a need to improve the emotional environment and the stimulating nature of online lessons.

**Attitudes to resources - benefits and concerns**

* Most useful according to students:
  + **Interactive tasks and games** (11/17)
  + **Good explanations** (9/17)
  + **Video lessons** (6/17)
  + **Motivating teacher/help from a friend** (5 total)
* Special resource suggestions:
  + *Interactive lesson through dialogue, not just listening*;
  + *Teacher and helper, but not one who gives the answers directly*;
  + *Different formats - text, video, exercises*;
  + *Feedback, personalization, check exercises*;
  + *Group work and projects*;
  + *Materials with a clear purpose and divided into parts*.

Students prefer:

* **Active, engaging resources**;
* **adaptive tools** that *maintain attention* and *do not overload them*;
* **multi-format approaches** (text, video, game);
* **tools for independent practice and revision** (chatbot, quiz, reflection).

In short, students prefer **active, visual and interactive** resources to passive listening. The presence of good explanations and motivation from the teacher is also key.

**Their most common concerns:**

* **Not understanding the material** - 6 students
* **Not to spend too much time in front of the screen** - 6 students
* **Not being too worried** - 6 students
* **Not putting myself out there in front of others** - 4 students
* **Other (distraction, technique)** - 4 students
* **Offensive comments** - 3 students

The main barriers related to **content understanding**, **time management**, **distraction** and **self-confidence**. Confidence is not lasting - support structures and self-reflection are needed.

**Understanding digital wellbeing**

Most students **do not use the term** 'digital wellbeing' directly but describe it **intuitively** by:

* *"not being overwhelmed", "not being distracted by other devices", "being able to concentrate", "a calmer environment", "balance", "feeling good online"*.
* References *to confidence*, *feedback*, *tech. issues*, *connectivity*, *task comprehensibility*.

The following emerged from the open-ended responses:

* Students understand digital wellbeing not only as a lack of tension, but also as **clarity, motivation and meaning in the learning process**.
* They value **structured, comprehensible and adaptable material** that involves them as active participants, not just listeners.
* There is a strong need for **interactivity**, **opportunity to check understanding**, **visualization**, **support (bot, feedback)**.

**WHAT ARE THE STUDENTS' REQUIREMENTS FOR THE EDUCATIONAL RESOURCE ACCORDING TO THE SURVEY**

| **Requirement** | **Characteristics of the recommended resource** |
| --- | --- |
| **Comprehensibility** | Clear, concise instructions and examples. |
| **Interactivity** | Built-in games, quizzes, feedback elements. |
| **Multimodality** | Combination of video, graphics, text and audio. |
| **Personalization** | Ability for the student to choose pace and form. |
| **Support** | Chatbot or prompts; opportunity for feedback. |
| **Motivation** | Visual progress, rewards, praise, student involvement. |
| **Project work** | Opportunity for group tasks and projects. |

**HOW THEY PRACTICALLY DESCRIBE THEIR IDEA WHEN GIVEN A GROUP PROJECT:** "IF I WERE CREATING A DIGITAL RESOURCE I WOULD DESIGN IT ..."

| **Group** | **Name of the resource** | **Main objective** | **Content type** | **How it contributes to digital wellbeing** |
| --- | --- | --- | --- | --- |
| **А** | *You know* | Innovative ways to learn | Videos, animations, interactive stories, dot games | Maintains interest, reduces boredom, adapts to the student |
| **B** | *Knowledge Hunter* | Test preparation | Dot games, interactive stories, videos, quizzes | Makes learning easier, no unnecessary pressure, promotes confidence |
| **C** | *Creators* | Develop creative skills | Tasks with feedback, quizzes, sharing ideas, visual elements | Freedom, creating, informal learning with connection to others of interest |
| **D** | *EasyLearning* | Exam preparation + accessibility and flexibility | AI assistant, quizzes, short tests, ability to study at your convenience, ask questions | Personalization, autonomy, sense of control over the process |

**What are the commonalities and ideas expressed by students in the focus group**

**1. Clearly structured and adaptable resources**

* All groups rely on **clearly presented content** - with quizzes, videos, explanations.
* There is a lack of feeling that current materials are sufficiently **understandable and accessible**.
* Example: *'will present a material in many ways'*, *'be accessible', 'be synthesised'*.

**Need:** for **intuitive, well-organized resources** that **are not overwhelming**.

**2. Personalization and choice**

* In two projects, the idea of **AI**, the ability to **ask questions** at convenient times, and **personalized learning paths** emerged.
* Example: *'to choose different topics and ways of perceiving'*, *'to learn at a time convenient for you'*.

**Need: flexibility**, **individual pace**, **self-regulation** - components of digital wellbeing.

**3. Visual and emotional engagement**

* Students pay attention to **interface**, **animations**, **visual elements**.
* Example: *'cool and eye catching interface'*, *'not boring'*.

**Need:** the environment should be **aesthetically pleasing**, **engaging** without being "sterile" or boring.

**4. Sociality and connection**

* Group C explicitly mentions **the opportunity to share ideas and co-create**.
* Example: *'to exchange experiences with others in the field'*, *'there is no app where you can create and share at the same time'*.

**Need: social learning**, **opportunity for expression and peer feedback**, not just one-way teaching.

**What topics are missing or vaguely touched on by students in the focus group?**

1. **The topic of safety and digital risks** is barely mentioned.  
   ➤ This suggests that students **do not associate digital wellbeing with security** unless it is directly threatened.
2. **Mental health** is only mentioned once.  
   ➤ The theme remains **non-verbalised**, although it is felt in themes such as 'not being overwhelmed', 'not being bored', 'having time to yourself'.
3. **The role of the teacher** is mentioned on only two occasions, but is not the leading one.  
   ➤ This may mean that students **seek autonomy**, but also that they do not see the teacher as an active participant in the digital content.

**OUR TIPS AND RECOMMENDATIONS FOR DEVELOPING EDUCATIONAL PRODUCTS**

Based on the analysis from the focus groups and surveys, five main **profiles of digital users among students** can be identified that are relevant for the creation of digital educational resources. These are an **excellent basis for creating so-called personas**, one of the most effective methods in design thinking

**1. The focused practitioner**

* **Basic need:** clarity, structure, control
* **Prefers:** short, well-explained lessons; opportunity for review and repetition
* **Challenge:** overload and lack of a clear plan
* **Suitable resource: a** coherently structured course with visual markers, targets and progress indicators

**2. The independent researcher**

* **Basic need:** flexibility, autonomy, choice
* **Prefers:** work at own pace, discovery approach, customized trajectories
* **Challenge:** boredom and frustration under constraints
* **Appropriate resource:** adaptable microlearning modules that allow choice of order and level

**3. Interactive learner**

* **Basic need:** participation, visualization, dynamics
* **Prefers:** games, quizzes, animations, videos
* **Challenge:** loses focus with dry content
* **Appropriate resource:** interactive simulation, gamified modules, visually oriented quizzes

**4. Collective participant**

* **Basic need:** collaboration, sharing, discussion
* **Prefers:** pair or group work, projects, collaborative activities
* **Challenge:** isolation in the digital environment
* **Appropriate resource:** collaborative projects, forums, tasks with a discussion component

**5. The passive observer**

* **Basic need:** motivation, confidence, support
* **Prefers:** brief instructions, incremental progress, opportunity for help
* **Challenge:** loses interest easily, does not actively participate
* **Appropriate resource:** chatbot with supportive role, opportunity for personal pace, encouragement as progress is made

**What this means for resource development in Digital Suite**

* Each of the profiles requires a **variety of approaches** - there is no one-size-fits-all format.
* The best solutions will include **modules that combine**:
  + Clear structure (for the focused),
  + choice (for researchers),
  + visualisation and dynamics (for the interactive),
  + collaboration (for the social),
  + support and reflection (for the observers).

**Why are they useful?**

* They help the team **think from the student's perspective**;
* They guide the **personalization of content**;
* Support **prototype testing** - 'Will Maria understand this? Will Kaloyan engage?"
* Facilitate communication between developers, educators, and content designers.

**Possible profiles and personas**

| **Profile** | **Possible personas** |
| --- | --- |
| Focused Practitioner | *Maria, 15, 10th grade, organized, likes structure and precise directions* |
| Independent researcher | *Assen, 17, 11th grade, independent, curious, hates boredom* |
| The interactive student | *Kaloyan, 14, 8th grade, visual type, learns by doing* |
| Collective participant | *Ellie, 16, 10th grade, likes to work in teams and share* |
| Passive observer | *Slavi, 13, 7th grade, insecure, loses motivation easily* |