Quantified Student

Dashboard Report



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# Version History

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| --- | --- | --- | --- |
| Version | Date | Author | Comment |
| 0.1 | 21.05.2023 | G. Malisz | First iteration of this document. Structure of the Dashboard development. |

# Overview

The following report provides an overview of the development of dashboard created to monitor and analyse student performance and its development. The dashboard is designed to provide key insights and metrics related to student progress, academic achievements, and overall performance. This report will highlight the iterative process of the dashboard design, the main components of the dashboard, the data sources used, and the key findings derived from the dashboard analysis and usability tests.

# Requirements

The requirements for the dashboard were agreed upon with stakeholder during interviews and utilizing the MoSCoW method (Must-Have, Should-Have, Could-Have, Won't-Have). These requirements can be referenced in the User Requirements Specification (URS) document, which outlines the agreed-upon features and functionalities of the dashboard. The usability tests conducted further refined the dashboard's layout and functionality to ensure it aligns with stakeholder expectations.

# Prototyping

Figma, a powerful design tool, was chosen for creating static layouts for the student performance dashboard due to its numerous advantages. The collaborative and cloud-based platform of Figma facilitated seamless collaboration and real-time feedback, allowing team members to provide their input and suggestions. This made it easier to incorporate corrections and adjustments based on user and stakeholder feedback, ensuring that the layouts accurately reflected their requirements. With Figma's extensive library of design elements and components, the design workflow was streamlined, enabling efficient creation of visually appealing layouts. Furthermore, Figma's responsive design capabilities ensured a consistent user experience across different devices. By leveraging Figma's collaborative features and efficient correction process, an iterative and user-centred design approach was fostered, resulting in refined and user-friendly static layouts for the student performance dashboard.

Later on, Figma's capabilities went allowed for the expansion into dynamic prototypes, enabling improved A/B testing. With Figma's interactive features, designers were able to create prototypes that simulated the functionality and user interactions of the student performance dashboard. This allowed for more comprehensive usability testing, where different design variations could be compared and evaluated in real-time. By incorporating dynamic elements and interactions, designers could gather valuable insights on user preferences, behaviours, and engagement patterns.

# First Design Layouts

The initial design drafts for the student performance dashboard were created with careful consideration of the stakeholder requirements and insights gathered during the interviews or inside QS team. The aim was to develop a dashboard that effectively addresses the specific needs and expectations of the stakeholder. Taking into account the agreed-upon requirements the design team generated two layout concepts for the dashboard. The design team incorporated the principles of information hierarchy, visual clarity, and responsive design. The layout designs aim to provide a user-friendly interface that facilitates easy navigation and data interpretation, while focusing on the aspects of Intuitive Navigation, Clear Visual Representations and Responsive Design.

Resources:

<https://www.datapine.com/blog/dashboard-design-principles-and-best-practices/>

<https://www.geckoboard.com/best-practice/dashboard-design/>

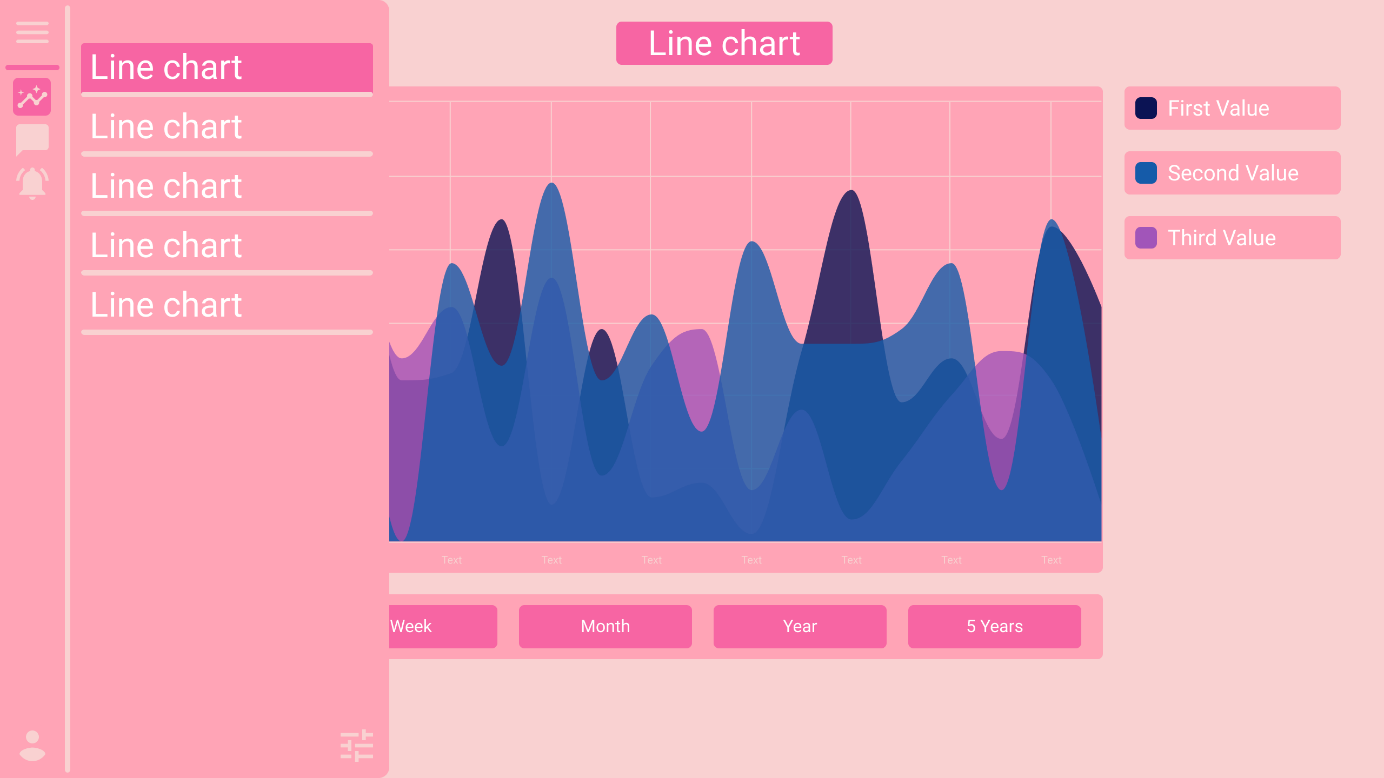
<https://uxplanet.org/10-rules-for-better-dashboard-design-ef68189d734c>

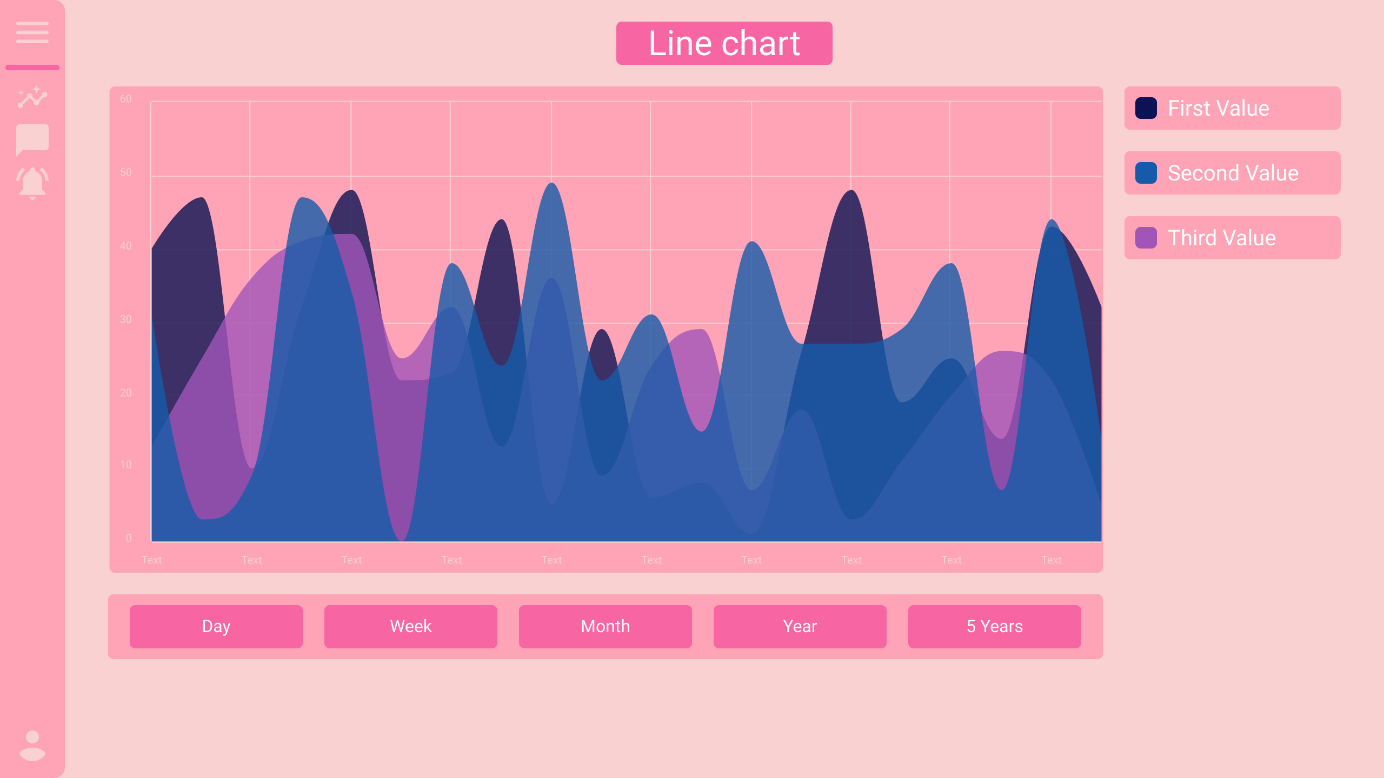
<https://dribbble.com/shots/2742901-Creative-Dashboard-Design?1464429214>

<https://elements.envato.com/dashboard-design-SYBHHQV>

## First Layout

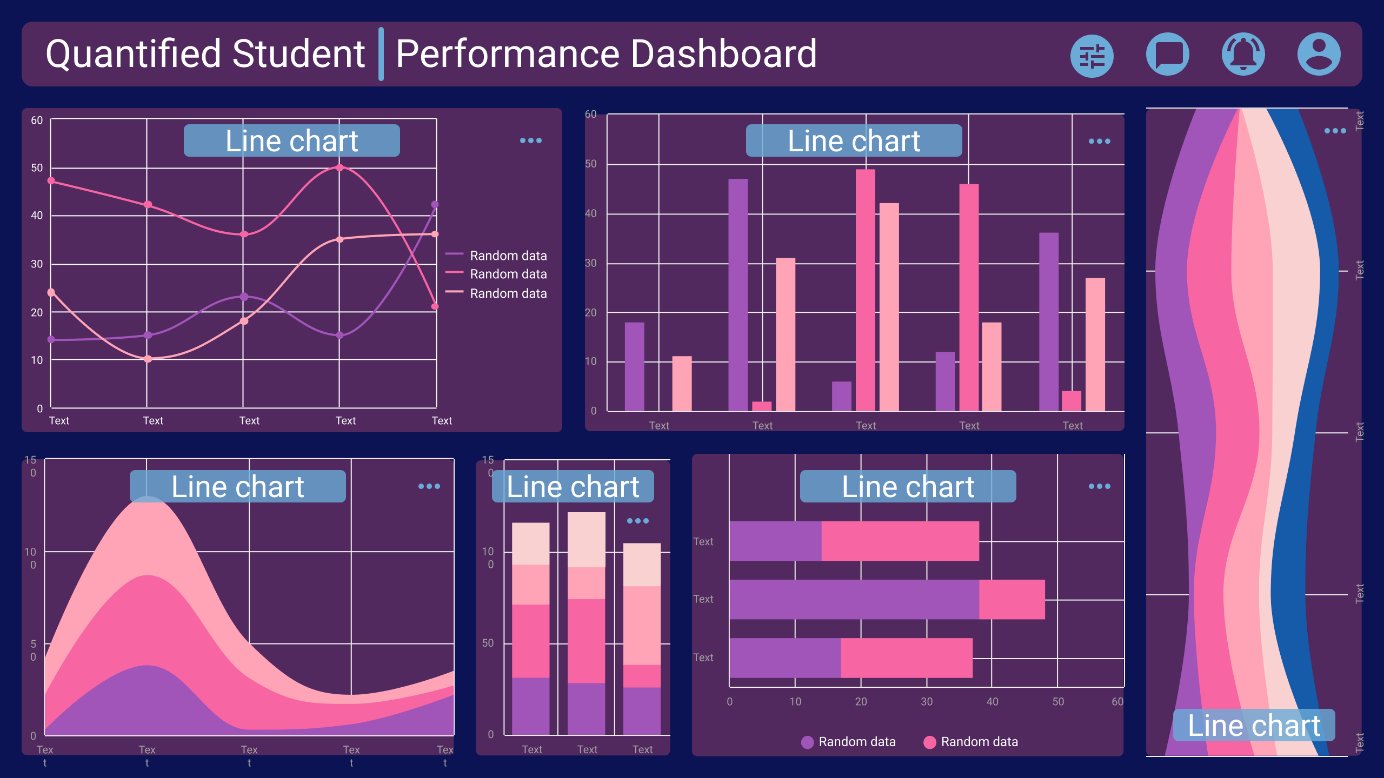
The first layout concept had a more traditional and static design approach, emphasizing minimalism and simplicity. It targeted clear representation of particular graphs or charts, allowing stakeholder to focus on specific metrics or subjects of interest. The navigation structure was intuitive, providing a straightforward and easy-to-follow layout for accessing relevant information.

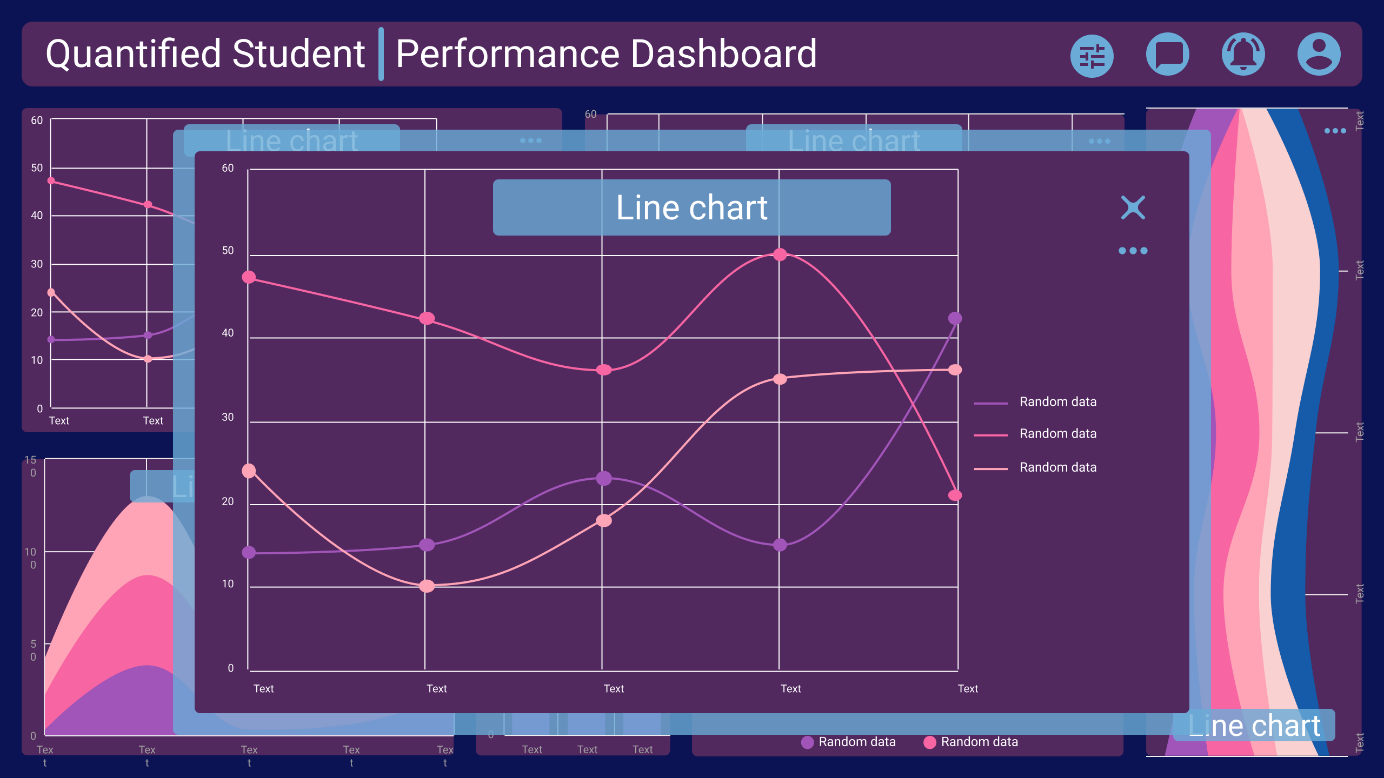




## Second Layout

The second layout concept adopted a more intuitive and interactive design approach. It featured a simple and structured layout that created quick access to all relevant information. The design aimed to be more dynamic, allowing stakeholder to personalize their view and interact with the data. Interactive elements such as customizable widgets and drill-down capabilities were incorporated to enhance user engagement and exploration of the data.





The design drafts served as a starting point for further refinement and iteration based on stakeholder and QS team feedback and usability testing results. The collaborative process between the design team and stakeholder ensured that the layout concepts aligned with the agreed-upon requirements and provided an intuitive and visually appealing interface for the student performance dashboard.

# Usability Tests

Usability tests play a crucial role in the development of any project, including the creation of a student performance dashboard. These tests are necessary to ensure that the dashboard meets the needs and expectations of the stakeholders and end-users. These tests offer advantages such as a user-centric design approach, identification of issues and improvements, validation of design choices, optimization of workflow and efficiency, and increased user satisfaction. By leveraging usability testing, designers can ensure that the dashboard delivers a superior user experience and effectively supports educational institutions in monitoring and improving student performance.

## First Iteration Tests

The first iteration of usability tests for the student performance dashboard primarily focused on selecting the best dashboard layout and confirming the reliability and accuracy of the data sources. The tests aimed to gather feedback from stakeholder and end-users regarding the usability, clarity, and effectiveness of the different layout options. Participants were encouraged to explore the dashboard prototypes, providing valuable insights on the intuitiveness of the navigation, the visual presentation of data, and the overall user experience. Additionally, the usability tests ensured that the data sources integrated into the dashboard were reliable, up-to-date, and aligned with the stakeholder expectations. By validating the layout design and data sources in the initial usability tests, the project team could proceed with confidence in further refining and enhancing the student performance dashboard.

First Usability Test can be found in the *Quantified Student Dashboard Usability Test1.pdf* file

# Conclusion

The student performance dashboard provides a comprehensive overview of student progress, achievements, and areas for improvement. The requirements for the dashboard were agreed upon during stakeholder interviews, and usability tests were conducted to refine the dashboard's layout and functionality. The dashboard effectively utilizes data sources to present meaningful insights, enabling students and educators to make informed decisions and implement targeted interventions to improve student performance. The feedback from usability tests played a crucial role in enhancing the dashboard's usability and ensuring it meets the needs of the stakeholder. The student performance dashboard is an invaluable tool that fosters a supportive and effective learning environment, ultimately leading to improved educational outcomes.

# Definitions, Acronyms, and Abbreviations

|  |  |
| --- | --- |
| Abbreviation | Meaning |
| URS | User Requirement Specification from file: QS - User Requirement Specification.docx |
| QS | Quantified Student |
| LTI | The integration technique that we will use to add an application to Canvas |
| DataAnalyseMicroservice | Main part of QS that is gathering and processing data |
| Microservice | Small independent services that communicates with Application |