Project Charter

DOST STARBOOKS: Whiz Challenge

Purpose

The DOST STARBOOKS: Whiz Challenge is a project that aims to improve the existing STARBOOKS quiz app by making it more fun, engaging, and suited for Grade 1 to 12 students learning science and math. We're addressing the limitations of the current version, like having only one game mode, no player progress tracking, and no multiplayer feature. To fix that, we're building a new offline-first platform that includes four different game modes, a reward and badge system, a player statistics dashboard, and an upgraded admin panel. The admin side will also have AI tools to help generate questions and view data analytics. Since the app is designed to work even without internet, it can still be used in areas with limited connectivity.

High-level project description

The DOST STARBOOKS: Whiz Challenge is a gamified learning app built to make Science and Math more fun and interactive for students. It's an offline-first system, which means it can run without internet, making it ideal for schools or areas with limited connectivity. The app offers four game modes: Whiz Challenge (solo quiz), Whiz Memory Match, Whiz Puzzle, and Whiz Battle (1v1 quiz), each with different difficulty levels, badges, player stats, and even real-time multiplayer for the battle mode through online syncing.

On the admin side, there's a dashboard where admins can manage players and questions, generate quiz items using AI tools, and view analytics like player activity and trends. We'll know it's working well if more students are engaged, play more often, and show better understanding of the topics. Another sign of success would be more schools or communities using STARBOOKS kiosks regularly.

The app is mainly designed to work offline, with online access only needed for some features like multiplayer battles or AI-generated content. We assume that kiosks will be available on-site and that admins won't need much training to use the system. However, we also expect some challenges, like unreliable internet in remote areas, and making sure the app works smoothly even without a constant connection.

High-level milestone schedule

Planning & Design:

- Apr – May 2025: Planning and Requirements Analysis
- May – Jun 2025: Wireframing and UI/UX Design in Figma

Development Phases:

- Sep 2025: Develop core player features (Register/Login, Profile, Quiz Game, Stats)
- Oct 2025: Develop Memory and Puzzle games, Rewards System
- Nov 2025: Develop Whiz Battle (multiplayer), Real-time Features
- Dec 2025: Finalize Admin Dashboard (user/content management, AI, analytics)

Testing Phases:

- Jan 2026: Internal Unit Testing per module, Integrated System Testing

- Feb 2026: Usability Testing with real users (Pilot Phase)
- Mar 2026: Performance Optimization, Offline Testing, Bug Fixes

Pre-deployment & Code Freeze:

- Apr 2026: Final polish, deployment to kiosks
- Code Freeze Period: Mar – May 2026

Release & Finalization:

- May 2026: Final QA check, full system dry run, Soft Launch (select schools and DOST events), Final tweaks based on feedback
- June 2026: Official Release

Rough cost estimate and budget

This project doesn't require any direct funding, since we're working closely with DOST-STII, who will act as our technical advisers throughout the development. There's no money involved, just collaboration and support. To build the system, we're using free and open-source tools, libraries, and platforms so it stays compatible with the existing STARBOOKS kiosk hardware.

Our goal is to keep things efficient and cost-effective, while still making sure the system meets high standards when it comes to quality, security, and performance. Since we'll be deploying it on the current DOST kiosks, we don't expect any extra costs for hardware or software licenses.

Stakeholders

- **Project Sponsor:** DOST-STII
- **Target Users**
    - **End Users:** Grades 1 to 12 students, exhibit visitors
    - **Admin Users:** teachers, librarians, exhibit facilitators
- **Development Team**
    - **Project Manager:** Kelly Dumbrique
    - **Documentation Lead:** Janice Maxene Salipande
    - **UI/UX Designers:** Shandrae Lois Quianzon, Arcielle Marie Gercan, Janice Maxene Salipande
    - **Frontend Developers:** Shandrae Lois Quianzon
    - **Backend Developer:** Arcielle Marie Gercan
- **Testing Team**
    - **QA Lead:** Kelly Dumbrique
    - **Testers:** Arcielle Marie Gercan, Shandrae Lois Quianzon, Janice Maxene Salipande

Project manager

Kelly Dumbrique – Project Leader, NEXUS Team

Project manager's responsibilities

Kelly is in charge of managing the whole project, from planning all the way to deployment. As the project manager, she keeps the team organized, sets deadlines, tracks progress, and makes sure everyone stays aligned with the project goals. She also acts as the main communicator between our team and DOST-STII, making sure everything we develop meets their expectations and stays on schedule.

Work the Project Manager Will Perform on the Project:

- Lead and coordinate team meetings

- Communicate with DOST-STII consultants for technical feedback and approvals
- Track development milestones and deliverables
- Support planning, documentation, and quality assurance
- Help resolve issues or blockers faced by the team

Project manager's authority

Kelly takes the lead when it comes to making key decisions for the team, like assigning tasks, setting the project direction, and deciding which features to focus on first. As the project manager, she also handles the scheduling, coordinates with stakeholders like DOST-STII, and makes sure the team stays on track. If any issues or conflicts come up, she steps in to help resolve them and ensures everything gets done on time.

Formal declaration of sponsor's support

Sponsor Name: Ms. Marievic V. Narquita

Position: Information Services Section (lSS) Head, Department of Science and Technology – Science and Technology Information Institute (DOST-STIl)

Authority: As the Section Head of lSS, where STARBOOKS is managed, Ms. Narquita has the authority to provide strategic guidance, ensure alignment with STARBOOKS goals, and serve as the project's main sponsor and liaison during development.

Statement of Support:

As the Section Head and official sponsor of the STARBOOKS Whiz Challenge project, I express full support for this collaborative initiative between DOST-STII and the student development team from Asia Pacific College. This project embodies our shared vision of making science and technology education more engaging, interactive, and accessible-especially for students and learners in areas with limited internet connectivity.

The proposed Whiz Challenge platform will enhance the STARBOOKS experience through gamified learning, performance tracking, and offline-first technology. We believe this innovation will significantly contribute to the educational impact of our existing kiosks and support our ongoing efforts to reach a broader audience.

As sponsor, I am committed to providing the necessary guidance, feedback, and support to ensure the project's success from development to deployment. We are confident that this partnership will result in a valuable educational tool aligned with our mission.

Signed,

MARIEVIC V. NARQUITA
Supervising Science Research Specialist
Section Head, Information Services Section
Information Resources and Analysis Division, DOST-STII
11 August 2025

LEARNING