

XJTLU Student Personal Data Centre

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1. Background

Prior to the development of the Student Personal Data Centre, student data at Xi'an Jiaotong-Liverpool University were dispersed across multiple independent systems, including the academic management system, library system, sports centre system, and student society management system. Students were required to switch between different platforms to access information such as course schedules, physical fitness test results, library borrowing records, and extracurricular activities. This resulted in complex user journeys and low operational efficiency.

At the same time, data across these systems were not interconnected or shared, making it difficult for the University to obtain a holistic view of students' overall on-campus engagement. As a result, precise data

support for personalised management and services was lacking, leading to data silos and fragmented service delivery.

2. Solutions

◆ Key Functional Design

The platform integrates core student-related data to enable one-stop presentation, including:

- **Academic data:** course titles, class schedules, locations, instructors, course progress, and attendance records;
- **Campus life data:** library borrowing history, in-library occupancy, overdue return reminders, and sports centre usage information;
- **Personal achievement tags:** such as *Attendance Champion*, *Sports Star*, *Library Regular*, and *Early Bird*;
- **Basic profile information:** length of enrolment, AD account, affiliated campus, and team;
- **Public resource usage data:** popular buildings and discussion room utilization.

All key information is consolidated into a single interface, providing students with a comprehensive and intuitive personal data view.

◆ Process Optimisation Approach

- Data barriers between systems were removed by establishing unified data interfaces and sharing mechanisms, consolidating previously fragmented data into the **data management platform**;
- User query workflows were streamlined by reducing system switching and enabling rapid information retrieval through integrated search functionality, significantly improving data accessibility and convenience.

3. Outcomes and Benefits

- ◆ **Efficiency improvement:** Students no longer need to navigate multiple systems, and the average time required to locate relevant information has been significantly reduced;
- ◆ **Realization of data value:** Comprehensive integration and visualization of student data provide accurate data support for personalized academic guidance and rational resource allocation (e.g. optimizing resource distribution based on discussion room utilization);
- ◆ **Enhanced user experience:** Personalized tags and intuitive data presentation increase student engagement, positioning the platform as a core tool for daily campus life and academic management.

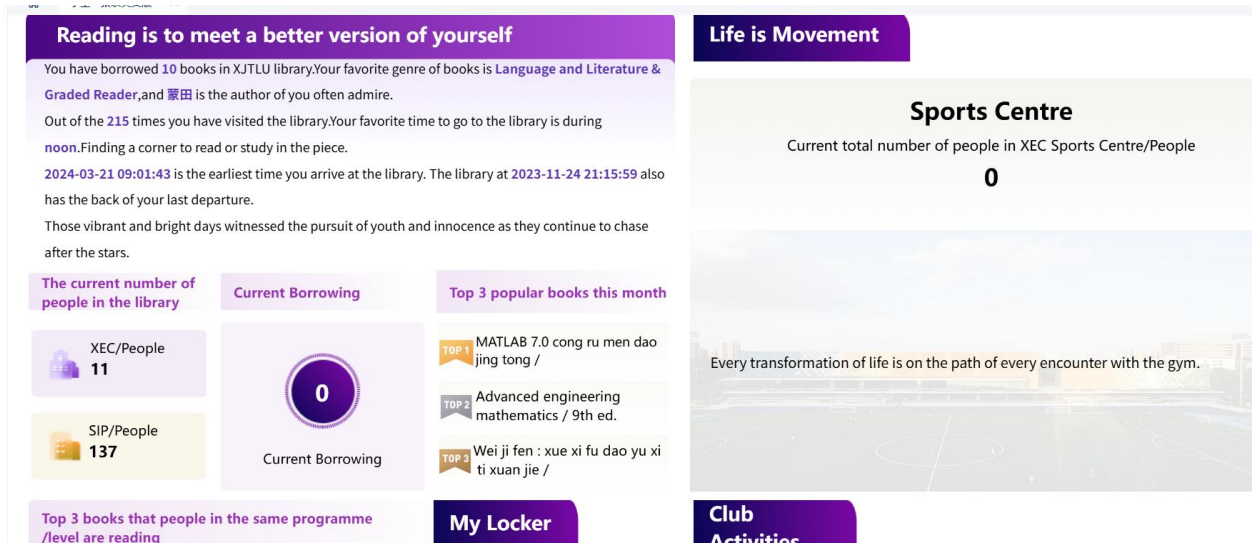


Figure 1. Student One Sheet

4. Replicability and Promotion Value

This case is applicable to a wide range of higher education institutions and educational organizations, particularly those operating multiple parallel systems with fragmented student data. Its data integration approach, one-stop presentation model, and unified interface architecture can be directly transferred to secondary schools, vocational institutions, and similar contexts to build comprehensive student data management platforms.

In addition, the solution can be extended to other domains such as enterprise employee data management and community resident information management, demonstrating strong scalability and broad promotion potential.

5. Next Steps

Future development will focus on further enhancing platform functionality by introducing personalized data recommendation features to push relevant information based on students' interests and needs. Data dimensions will be expanded by integrating additional sources, such as sports centre access gate data. The mobile version will also be further optimized to improve anytime, anywhere accessibility, enabling deeper exploration of data value and continuous enhancement of platform service capabilities.