INTEGRATING YOUR LEARNING MANAGEMENT AND STUDENT ADMINISTRATION SYSTEMS

Higher education has embraced cyberspace as a learning delivery channel so the connection between learning or course management systems and student administration has become critical. Duplicate entry, redundant data, and parallel but disconnected processes waste time and resources while increasing the risk for inaccurate data and vulnerability to security and privacy breaches. Oracle is the first vendor to higher education with a supported, standards-based solution to bridge the gap between the back office and the classroom.

What is the Student Administration Integration Pack?

Oracle’s PeopleSoft Enterprise Student Administration Integration Pack (SAIP) is the first product in Oracle’s new suite of solutions making it possible for higher education institutions to more efficiently integrate and manage their administrative and teaching and learning systems on campus. The suite, Academic Enterprise Solutions, intends to eventually integrate and extend all the systems that support the education experience including student systems, learning management, collaboration and communication, portfolios, analytics, identity management, library systems, parking systems, housing systems, and more.

Until now, integrations between applications within the academic enterprise have been brittle, complex and expensive. In some cases, when institutions have not had the resources to attempt integration, they have had to employ redundant and often manual processes to get the same information into different applications. At the same time, institutions that have invested in costly customizations and development to bring diverse systems and business processes into alignment find they need to re-invest in those resources with each upgrade or enhancement.

Oracle’s SAIP is different. SAIP is based on widely adopted technical and industry specifications and provides an open, standards-based integration from Oracle’s Campus Solutions 9.0 to today’s popular vendor-supplied and open source learning management systems. Oracle has partnered with Sakai, Moodle, Desire2Learn, and other vendors to make integration with these learning management systems less costly, more flexible, and extensible to future technologies, enhancements and upgrades.
What Can We Do With SAIP?

Because Oracle’s SAIP solution is open and standards-based, institutions are able to:

- Reduce the cost of supporting integrations by providing course information from Campus Solutions 9.0 to all the different applications that need to know what courses exist and the details about those courses including learning management systems, portfolios, wikis, facility management systems.
- Choose solutions based on the needs of your constituents, not on the limitations of your applications or resources for integration. Every application that adheres to the same standards as SAIP will plug into it—giving you the flexibility to change solutions, vendors, processes, and support different processes within your institution. Also, upgrades of any of these solutions can be done independently because integrations are not so brittle.
- Extend and expand the power of your student and learning management systems through publish and subscribe architectures and uptake of new technologies through the use of application programming interface (API) source code that is openly published for the community to use in building and integrating solutions.

How Does SAIP Work?

Oracle SAIP provides a web service-based interface for passing academic data from Campus Solutions 9.0 to other applications such as learning management systems. These web services create and maintain corresponding data in the other applications. For example, when a course is crated in Campus Solutions, the information is passed to the learning management system which would create a corresponding course site or virtual learning space. As students enroll in the course in the student system, their enrollment information is passed to the learning management system and they are listed as valid members of that course with all appropriate privileges. This approach eliminates the need for double entry or re-integrating the two systems every time an enhancement or upgrade is introduced into either system.
SAIP is the message broker that transfers enrollment, grades, and other information between systems. There are four ways that SAIP ensures that the student and learning management systems continually share and update information:

- **Snapshot-based integration**
- **Event-driven integration**
- **Grade integration**
- **Course mapping**

**Snapshot-based Integration**

Sometimes you will need to port large amounts of data from one application to another, such as when you are initializing your learning management system for the first time or at the beginning or end of a semester, or whenever you want to resynchronize systems—however you want it to support your processes.

SAIP will take all your data—people, courses, enrollment—and make it immediately available to the learning management systems. Your LMS has the option of instructing SAIP to send a full snapshot that will overwrite all previous data, or an incremental snapshot that will provide only the data that has changed or been added since the last snapshot was run.

**Event-driven Integration**

Some institutions, based on the expectations of their constituents, will want to use the event-driven model. This process means that the student system publishes data to achieve near-realtime synchronization between the two systems. For example, if a student enrolls in a course in the student system and a corresponding course exists in your learning management system, that student is added real-time—no more waiting overnight to be granted access to information, course materials, or other content that the student needs.

Triggers that would initiate synchronization are added to appropriate locations within the Student Administration system where data might be created, updated, or deleted. With Student Administration as the system of record, other applications are able to quickly and accurately reflect the real state of the data. Some of these triggers could include term, course, enrollment, grades, and biographical or demographic changes of an individual.
Grade Integration

Getting final grades out of your course management system and into your student system is often a tedious, sometimes manual process. SAIP eliminates duplicate entry and allows you to pull grades from your course management system whenever you need them. All of the standard checks and balances are still in effect just as they would have been if you entered them by hand. You will still be able to review, verify, change, and control grades before final posting.

Course Mapping

Every institution, department and instructor has their own preferences about how they want courses organized in their learning management system. Sometimes there are multiple learning management systems being used. SAIP provides a simple wizard that allows you to map your course offerings and sections in Campus Solutions to the structures that exist at all those different levels and instruction preferences and styles without expensive, customized integration. You can define simple templates that can be applied throughout the organization or you can specify who has control of how students are organized within your learning management system. And you can control, at a class level, what information participates in the integration.
You can group sections of a multi-section course in any configuration to your LMS.

SAIP has the capability of mapping the most complex course configurations including:

- Multi-section courses
- Cross-listed courses
- Scoping courses by term, institution, academic organization, specific sections, or all inclusive

**What Standards Does SAIP Employ?**

Oracle SAIP employs existing standards where available and participates in discussions to extend, modify, or create standards and specifications where none exist. This approach includes using IMS Learning Information Services (LIS) specifications and actively participating in IMS and other standards bodies to ensure that the materials developed serve and benefit the entire community.

The SAIP interface is constructed on the IMS LIS standard specification. This specification provides standard information models and protocols representing person, courses, enrollments, and outcomes.

Oracle is committed to open standards and will continue to build on existing knowledge, participate in the community of users and developers, and ensure future maintainability and extensibility of these solutions for higher education.