**ETEC 524: Assignment 1**

**Evaluation of Learning Management Systems**

Curtis Bourassa, Greg Corcoran, Mike Forsyth, Bobby Han, Allison Hubenig

University of British Columbia

ETEC 524: Learning Technologies: Selection, Design, and Application

Dr. Tatiana Bourlova

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Greenwood Secondary School (GSS) (OpenAI, 2023) is an 8-12 public school in the fictional city of Greenwood, BC with 1200 students (name generated by ChatGPT through the prompt of "Generate the name of a secondary school that needs a new LMS"). The school is organized by grade and homeroom. Grade 8-9 students have a homeroom teacher and grade 10-12 students are assigned a homegroup with a teacher for the year as well as a counselor until graduation. At GSS, student connections are highly valued; staff ensure that each student has contact with a consistent adult. GSS reports student progress of BC Curriculum by outcome with percentages. Teachers take attendance every period, so parents are informed of student absences. The school has excellent technology infrastructure, including consistent high speed internet access and a 1:1 program allowing students to bring their own devices. There is funding to support students who cannot bring a device to school.

GSS is seeking an LMS system that can be used to ensure students are actively connected with their teachers, homeroom teachers, and counselors. Students at the school want the ability to access schoolwork asynchronously and/or from home when absent from school. Parents expect clear and timely communication regarding attendance, student progress, and day-to-day learning.

### Explanation

We selected three Learning Management Systems (LMS) Edsby, Google Classroom (GC), and Microsoft Teams (MT) for comparison. These selections were made based on the familiarity of the platforms; members of the group had experience with one or more of each of the systems. This familiarity was considered important, given the short timeline, in comparing the suitability of LMS platforms for GSS.

To make our comparison of LMSs, we created a rubric using elements from the MIT CITE and IIM framework and Bates' (2014) SECTIONS framework (Osterweil et al., 2015). We chose this approach as the two frameworks are complementary when used together, overlapping on some topics, and filling in perceived gaps in the other, for example the issue of Security and Privacy from SECTIONS that seemed to be missing from the MIT CITE and IIM framework (Bates, 2014; Osterweil, et al., 2015). For each criterion we used a modified form of the MIT CITE and IIM framework responses and gave each category a score to allow for a numerical comparison of the three LMS systems (Osterweil, et al., 2015). Two points were awarded if the LMS met the criteria, one for partially meeting the criteria, and zero points for not meeting the criteria. Unknowns were not tabulated.

Based on our assessment rubric, MT and Edsby are nearly identical in their suitability for our scenario. GC lacked many of the features we were looking for. After discussion and debate, we opted to select Edsby based on its superior communication and learning tools, as well as widespread adoption in other areas, including Ontario (Edsby, 2018), Saskatchewan (Light of Christ Catholic Schools, 2020; South East Cornerstone Public School Division, 2023), Alberta (Livingstone Range School Division, 2023), and New Zealand (Edsby, 2019).

## Categories

### Interactions

Within the interaction category, Edsby met the criteria for communication with both students and parents. Hattie (2009) found that parental involvement has the potential to accelerate student achievement with an effect size of 0.42. Edsby allows for

increased opportunities to engage families as well as opportunities for educators to involve both parents and students in Edsby groups, clubs, and teams. Two-way messaging is available, allowing teachers to communicate directly with parents. Other parent features include the ability to submit planned absences, schedule a time for student-led conferences, and digitally submit permission forms.

School divisions in Saskatchewan have stated their success in implementing Edsby as an LMS. South East Cornerstone Public School Division (SECPSD) (2023) in a recent board meeting stated, "It is proving to be an overall program that is helpful as a solution to parental feedback regarding there being too many programs and apps to access for school communications, notifications, and information". Although there is a mobile app for Edsby, reviews of the app are not all positive. However, frequent updates to the mobile app are making the user interface easier for parents and students to navigate.

**Teacher**

Edsby offers many features that can replace other technology platforms that the school can use. Teachers can view both student and parent usage of the program allowing the school or teachers to target those who need additional support. Edsby also allows teachers to easily move content and assignments from previous courses to their new courses resulting in time saved. Edsby does allow for significant augmentation and modification of classroom tasks within the SAMR model (Puentedura, 2010) with the integration of both the Microsoft Suite and the Google Suite.

Given our school's needs, this is a category where Edsby has some limitations. Both MT and GC offer an abundance of professional development opportunities both

online and in-person, while Edsby does have an extensive information database where teachers can actively seek out information, professional development is not as readily available. Voice and audio calls are also not an integrated feature within Edsby, therefore limiting the opportunities teachers and staff have to connect with others outside of the school.

**Student**

Edsby's design offers an easy to navigate system for students to efficiently view their progress, hand-in assignments, or ask questions about assignments (see Figure 1). In addition, the Evidence of Learning feature allows students to curate successes for both teachers and parents to see (Buchanan, 2018). Utilizing the Single Sign-On (SSO) feature students will be able to easily and efficiently login to Edsby at all grade levels. Edsby's limitation within the student section includes lackluster features for accessibility, while translation features are available within the LMS, access to text-to-speech is not yet available. In addition, because Edsby is a web-based application, content can not be accessed while offline or during internet outages.

**Learning**

This is an area where Edsby shines. Student assessments can be customized to be formative or summative, and meet the needs for outcome-based reporting. While cross-curricular connections were a desired element for our Grade 8-9 classes that Edsby is currently lacking, we are told that it is planned for implementation in a future update. Students and teachers can post learning artifacts to a portfolio which is persistent from year-to-year, allowing students to look back on their accomplishments and teachers to see evidence of prior learning.

Burnett (2016) discusses that learning occurs through interactions and digital tools afford an increase in membership for students. Through the use of Edsby, students are afforded multiple memberships - both in the classroom and online. Students benefit from increased access to teachers as they can communicate asynchronously outside of school hours in addition to in class (Chickering & Ehrmann, 1996). Finally, Edsby supports collaboration and social interaction, identified by Dumont et al. (2010) as a principle of learning.

**Administration**

Edsby is available at a reasonable price point of around $4 per student/year. Additional customizations and features are available at a flat fee. While the other LMSs do have free options, Bullen (2014) argues that free options "require a significant and costly investment of technical support to install and customize the application which often eats up any savings from the license fees". While technical support is included in Edsby's licence fees, there can be long response times for lower priority items.

As far as school operations go, integration of both attendance and gradebook means that educators are not required to access the Student Information System (SIS). Administrative oversight of classes allows administrators to check in on student progress and assist with other information.

**Security & Privacy**

Through integration with our SIS, student data is securely transferred and stored on Microsoft servers located in Canada (Edsby, n.d., Question 3). This was an essential criterion for an LMS as it is required by provincial law through the Freedom of Information and Protection of Privacy Act (FIPPA). Students can be set up to log on

through SSO, integrating with their existing school email, reducing the number of passwords that they have to remember and increasing their account security. All data and materials created on Edsby remain the intellectual property of the creator, and we as the school can remove any unwanted materials on our own, and request any data be deleted through contact with Edsby. Although our instance of Edsby is not monitored on an ongoing basis by the vendor, other than providing regular updates, support is available when required.

**Sustainability**

From a sustainability standpoint, Edsby meets the needs of GSS well. The costs will be consistent for the future and consistent updates will continue as well. The infrastructure allows for multiple teachers to be assigned to a class, providing the connection with students that GSS values. Learning will be impacted in a positive way as teachers can provide more opportunities of blended learning, cross-curricular opportunities, and the potential to integrate technology at the Modification and Redefinition levels (Puentedura, 2010).

| Category | Criteria | | | | | |
|---|---|---|---|---|---|---|
| **Interactions** | Communication with Students | | | | | |
| **Teacher** | Transferability | Teachers can easily reuse course content from previous courses/years | | | | |
| | | Course content can be imported from previous LMS | | Teams | Edsby Google | |

| Category | Criteria | Criteria Description | Meets Criteria (2) | Meets Some of Criteria (1) | Does Not Meet Criteria (0) | Unknown |
|---|---|---|---|---|---|---|
| **Students** | Ease of Use | Single-Sign on integration | Edsby Google Teams | | | |
| | | Customization options, profile pictures, school logos, colours, etc. | | Teams Edsby | Google | |
| | | LMS design and layout is functional, simple, intuitive | Edsby | Google Teams | | |
| | Accessibility | Multi-platform and browser compatibility (desktop, tablet, phone) | Google Teams | Edsby | | |
| | | Accessibility features (Text-to-speech, translation, EAL) | Teams | Edsby Google | | |
| | | WCAG Compliant | | Teams | Edsby Google | |
| | | Access to content offline | Google | Teams | Edsby | |
| | | Access to subject and homeroom teachers, counselors, and administrators | Edsby Google Teams | | | |
| **Learning** | Evidence of Learning | Opportunities for students to highlight successes of learning. | Edsby Google | Teams | | |
| | Measurement of Learning | Opportunities for summative and formative assessment | Edsby Google Teams | | | |
| | Cross-curricular opportunities | Opportunities for cross-curricular connections | Google | Teams | Edsby | |
| | Curriculum Connections | Import specific outcomes/curricular competencies and attach directly to assignments or gradebook entries | Edsby | Teams | Google | |

| Category | Criteria | Criteria Description | Meets Criteria (2) | Meets Some of Criteria (1) | Does Not Meet Criteria (0) | Unknown |
|---|---|---|---|---|---|---|
| **Administration** | Attendance | Ability to take attendance | Edsby | | Google Teams | |
| | Cost | LMS ranked by cost | Google (Free) Teams (Free) | | Edsby (~$4/year per student) | |
| | Oversight | Administrative access to course content | Edsby Google Teams | | | |
| | Tech Support | Support for bugs/issues is accessible and prompt | Google Teams | Edsby | | |
| **Security & Privacy** | User Information Security | Users determine what information is shared and what is kept private | Edsby Teams | Google | | |
| | Copyright and Intellectual Property Rights | Users maintain ownership over their own intellectual property | Edsby Teams | Google | | |
| | Data Security | Data storage meets district and ministerial requirements | Edsby Teams | | Google | |
| | | Ongoing monitoring of LMS conducted by vendor | Teams | Edsby Google | | |
| | FIPPA (BC) Compliant | FIPPA compliant | Edsby Teams | | Google | |
| | Releasing of Information | User sign-up required to access LMS, institutional approval required | Edsby Google Teams | | | |

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**Figure 1:**

*Image of Edsby Interface*