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Case Study

Edwards-Knox Central School District & Castle Learning Online

Russell, New York

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Demographic Background, Russell, NY

The **Edwards-Knox Schools** are located in St. Lawrence County, NY, just south of the St. Lawrence River and east of Lake Ontario. The 2000 US Census recorded a population of 1,801 people in the town of Russell itself, the location of the **Edwards-Knox Jr. Sr. High School** used in this study.

Based on this census, the occupations of the populace for the community are primarily involved in Management and Professional work, followed by Service occupations, Sales and Office occupations, then Production, Transportation and the movement of Material Goods, and last listed, Construction and Maintenance occupations. A small percentage of the population is involved with Farming, Fishing and Forestry occupations. The largest industry, by percent, for the population of Russell, is in the fields of Education, Health and Social Work (15%).

Edwards-Knox Jr. Sr. High School served a total of 336 students in **Grades 7-12**, with a grade-level breakdown of 42 (Grade 7); 51 (Grade 8); 69 (Grade 9); 57 (Grade 10); 58 (Grade 11) and 48 (Grade 12), with 11 students designated Ungraded Secondary.

The population of any particular school reflects that of the entire district. According to the **2006-07 NYSDOE BEDS** [Basic Educational Data System] census, approximately 47% are eligible for Free Lunch, 10% eligible for Reduced-Price Lunch, there is a student stability rated of 98%, and a racial/ethnic diversity of 0% American Indian or Alaska Native, 0% Black or African American, 1% Hispanic or Latino, 0% Asian or Native and 98% White.

District Assessment of Current Education Needs

I was able to work with Jeff Davis, the Principal of the **Edwards-Knox Jr. Sr. High School**. Mr. Davis has a clear vision for his students and is extremely supportive of his staff in reaching several goals. He explained, "I would like to see improvement in Regents test scores. To have 70% of our students scoring in the 85% or above range would be excellent."

Castle Learning Online in Edwards-Knox Schools

Students in **Edwards-Knox Jr. Sr. High School** had the use of the *Castle Learning Online* website for the past two years, and in **2007-08**, students answered over 62,282 questions, with the greatest emphasis placed on the Sciences (39,944), followed by Social Studies questions (19,744), and Math (2,480).

How Teachers Currently Use *Castle Learning Online*

In order to learn *how* teachers currently use *Castle Learning Online*, a **Teacher Questionnaire** was provided to educators at the **Edwards-Knox Jr. Sr. High School** who are using *Castle Learning Online*. The school serves a small population of approximately 325 students in all of grades 7-12, with an average graduating class of 45-50 students. The results revealed the following:

- **Purposes for Use:** Teachers are using *Castle Learning Online* primarily in several distinct ways:
 - Remediation before a quiz or test
 - As a review for several units of study
 - For extra credit
 - As a test, especially with the new option to print in 2-column mode that replicates the Regents exam style

- **Frequency of Use:** The responses from teachers include some added thoughts worth reading :
 - Some teachers use *Castle Learning Online* once per month or will emphasize use near the end of the year when final exams and NYS Regents exams are given. As explained by one teacher, they said “I average once a week, more frequently in the two months before the Regents exams.”
 - A teacher of Special Education students said that she uses *Castle Learning Online* “as often as possible. Generally, I use it to supplement what the general education teachers are doing.”
 - A teacher of both Chemistry and Physics explained that she uses *Castle Learning Online* “on average four times a month in Chemistry and two times a month for her Physics class.”

- **Most Used Features:** *Castle Learning Online* is meant to be a supplemental tool that supports the classroom lesson. Teachers gave the most emphasis to these *Castle Learning Online* features:
 - Quiz mode for assignments [Note: This feature allows a teacher to give students the assignment questions without the ability to review the hints and reasons associated with a question that allows for a re-try if a question is answered incorrectly.]
 - Importing questions from old assignments, thereby mixing current course content with areas that need consistent review or where students have previously shown a weakness. [Note: Importing questions from old assignments is a feature that allows a teacher to view questions from all prior assignments, recognize how many students displayed a weakness or strength with that content area and check the question to be

- included in a new assignments. Thus, teachers can “review” while giving students “new” questions.]
- Grouping assignments into folders [Note: This feature allows teachers to organize their assignments into units of study, find and reuse old assignments or questions within those assignments.]
 - Mixing course content from several courses [Note: This feature could be used by a Physics teacher who wanted to check on student understanding of adding and subtracting fractions, questions that can be imported from an elementary or intermediate course in mathematics.]
 - Encouraging students to create their own self-generated assignments [Note: This feature allows a student to create an assignment of his / her choosing, emphasizing weaknesses from previous topics being reviewed or to delve into a study of vocabulary or math skills that require re-examination]

Effectiveness of *Castle Learning Online* in Meeting Needs of Students and Teachers

The Teacher Questionnaire also provided teachers an opportunity to elaborate on the effectiveness of *Castle Learning Online* in meeting the academic needs of their students. In these responses, teachers refer to the NYS Regents exams, which are state course tests given each year similar to EOC (End of Course) or EOG (End of Grade) exams administered in other states.

- **Type of Students Who Benefit:** When asked what kinds of students would benefit most from using *Castle Learning Online*:
 - Most teachers responded that both high-end achievers and average students will find *Castle Learning Online* useful.
 - Several focused on “students needing constant remediation” and the teacher of Special Education students with learning disabilities reported how it helps her with the individualized needs of her students.
- **Benefits Offered to Teachers:** When asked what benefits does *Castle Learning Online* offer to you, educators commented:
 - A teacher of Chemistry and Physics explained that “the biggest benefit I notice is that it allows students who want to improve their understanding an avenue to do that on the computer.”
 - The teacher of Special Education focused on using *Castle Learning Online* as a “good review of content area information.” She added that it was a quick and easy way to create assignments for her students.
 - For his Living Environment program (grades 8, 9 and 10) and with AP Biology (grade 12), this teacher explained that “as a 25-year teacher, I usually know intuitively what my students are weak in. I select more of those questions (from *Castle Learning Online*) for Regents practice.”
 - One educator of Intermediate Science, for his grades 8 and 9 students, he emphasized the benefit of *Castle Learning Online* to create “quick assignments for grading” and the ability to “help identify strengths and weakness.” He wrote that questions can be answered in a “self-paced way and this increases motivation.” He also liked the idea that it was a “quick test generator,” which can be a helpful factor when considering a teacher’s busy schedule.

- **Performance Results:** When asked whether students perform better or exceed expectations on state exams when using *Castle Learning Online*, comments included:
 - The teacher of middle and high school sciences pointed out that “My two students completing the largest number of questions (using *Castle Learning Online*) last year, received a 94% and 97% on the Regents exams, respectively.”
 - The teacher of Chemistry (grades 10-12) and Physics (grades 11-12, along with an Engineering course (grades 11-12), said that her student’s passing rate was 90% or better with a grade of at least a 65%.

Concluding Thoughts

When I walked through the halls of **Edwards-Knox Jr. Sr. High School** and met the teachers and students, I observed a staff that exhibited a sheer sense of pleasure for teaching in this small rural school. Principal Jeff Davis shared that student performance and the attitude toward learning were helped by using *Castle Learning Online* and that “the teachers feel students are better prepared for their Regents tests.” He added, “Teachers feel students enjoy learning using Castle Learning.” One of his teachers concurred, “Overall, students do enjoy the program because they like working online.”

Mr. Davis also told me that it was rare for the president of a company to take the time to visit the teachers and students they serve. I appreciated that comment and I have to admit this trip and other similar field experiences are invaluable to us at Castle Learning. He added that our Training Specialists also continue the same dialog with his teachers as they offer Free Staff Development each year. He explained the training was especially important for new teachers and could prove useful for those who are experienced on his staff. As a final note before leaving that day, Mr. Davis and one of his seasoned staff members reported that an Assistant Principal from a neighboring school phoned to ask how well *Castle Learning Online* worked to benefit students in the ELA area. Their supportive reaction to the call suggested I might be visiting the area again soon.