Edit 486 Final Paper Assignment

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**Setup**

I will be teaching fourteen Grade 12 students in a Spanish 30 class. The students will be creating a game using SCRATCH which will be introduced mid-way through the semester. This way students would have had a chance to explore new historical and contemporary Spanish culture with enhanced vocabulary and grammar. SCRATCH was chosen because students can import graphics and music into the program, this feature allows for inclusion of Spanish Cultural Elements. The class will alternate between accessing the school’s laptops as well as the computer laboratory. The typical delivery of a Spanish class consists of learning grammar and vocabulary, watching a movie, in-class conversations, listening to Spanish music, watching cultural videos, reading stories and writing compositions. The school’s administration is generally open to innovative pedagogical methods as long as they can be justified by the curriculum.

**Inputs (Instructional Content)**

The Spanish 30 curriculum has the following four general outcomes: Applications, Language Competence, Global Citizenship and Strategies (Alberta Education, 2006, p. 5). Game construction is a creative way to demonstrate applications of Spanish since it evokes: imagination and personal enjoyment (A-5); expression of emotions and personal perspectives (A-2); receiving and imparting information (A-1); expression of intent, appreciations, and advice; conversing with peers (A-6) (Alberta Education, 2006, p.5). Throughout the SCRATCH unit, students will be exposed to language competence. They will have to interpret the SCRATCH challenges from the SCRATCH Workbook that I will provide in Spanish. The students will have to produce written narratives in their games and in some of these challenges where they will have to use proper grammar and verb conjugations. The students will listen to screencast tutorials in Spanish and have to ask questions in Spanish thus fulfilling the interpretation of oral texts outcomes (Alberta Education Program of Studies, 2006, p.5).

In terms of Global Citizenship, game construction is a part of STEAM learning, these careers are in high demand all over the world, in addition to Spanish as a Second Language (GC-3) (Alberta Education Program of Studies, 2006, p.31). Each game will have to incorporate at least two Spanish cultural aspects (GC-1) (Alberta Education Program of Studies, 2006, p.5). Strategies will also be addressed because that entails general learning, language use and language learning, which will happen with students communicating, looking up vocabulary, hearing programming vocabulary (Alberta Education Program of Studies, 2006, p.33).

The resources and scaffolds that I will provide my students will consist of screencasts, debugging game activities as well as always being available to respond to emails for help. I want to use a flipped classroom blended Learning approach in terms of doing SCRATCH tutorials that is intended to introduce them to the SCRATCH program and guide them with their laboratories. I will create a screencast of the tutorial in Spanish and provide subtitles in Spanish. The screencasts and tutorials will be done at home. The students will have time to work on their laboratories in-class where they can receive extra support from peers. Another scaffold that I believe is beneficial is the SCRATCH Debug It Activities, it allows students to practice critical thinking and identifies some common problems that may plague their programming. Another aspect that will act as a resource, will be the Spanish Lesson of the day which will have either a Spanish Adventure tale or some cultural aspect that will ignite ideas for their project. I also want to create a worksheet that identifies and translates key programming terms to make the screencasts easier to understand.

The activity time frame will be six weeks and a day to do the SCRATCH laboratories and to complete the final game project. Each class is an hour and twenty minutes long twice a week, thus they will one class each week to work on their tutorials. One class will consist of brainstorming their games, three classes to work on their SCRATCH games and the week after they will present their games. The timeline for our scratch projects were 5 weeks, however we had more class time to do them therefore I wanted to give my class an extra week to work on their projects.

There will be no student groupings in the classroom, however collaboration on the projects and tutorials will be encouraged. Students should not be grouped because every person has some trick or tip that they learned. Sharing needs to be done with more than one person because everyone has something to teach and this promotes innovative ideas and more creative games. Research shows that peer collaboration and learning is a very effective strategy especially in regards to learning about technology (Bauer, 2007)

I want to communicate with the administration, the students and their parents about what the project entails and how it relates to the curriculum. I want to ensure that they know the reasons for the implementation of the project and I want to be able to address any questions or concerns.

I want these stakeholders to acknowledge that there is a government initiative called Inspiring Education that promotes student competencies in thinking critically, solving problems, managing information, being innovative, applying multiple literacy, demonstrating global and cultural understanding, and identifying career skills (Alberta Education, 2010, p. 26). The Spanish Curriculum coincides with these values and an activity like game construction enables promotes these competencies. I have talked to younger students and they think that creating games are really great. A study performed by Carbonaro and Colleagues (2010) found that 72% of fifty students enjoyed it at least some in a high school setting!

**Process (Game Construction Cycle)**

After we finish our tutorials and before the students start creating their games one day will be devoted to brainstorming. I want to have a class discussion where we brainstorm what a constitutes a good game. We will then have to brainstorm three amazing games that we have played online that are relatively short. The students will then get a chance to try playing these games, then we will adjust our previous great game elements list. Then the students will have to plan for their own game by writing a short game story. The students will then be assigned the rubric and will have to self-assess their writing. Students must include their narrative in the game and incorporate at least two cultural elements this shows that they have done some research in exploring the Latin culture and can empathize with it. If they are unsure of what cultural references to use, they can look at the stories and cultural notes we made at the beginning of the year or research their own. Once these steps are completed they can begin creating their own games.

My role as the teacher will be to be the guide on the side. I want to be there if the students really need help on something. I do not want to provide them with answers immediately, I may ask another student who has overcome the same challenge to teach the other student who now finds herself having the same issue. I also want to ask questions to probe them to think deeper such as how else can we try and code that particular sequence, or what else did you try to use here. I will also be available to provide help with Spanish Grammar and language barriers. My role as a teacher will also consist of allowing students to email me if they have issues, it is also my role to provide extra resources for the students whether that is grammar help, they need an idea for their game. For example, I noticed that in SCRATCH someone has created a game on Don Quixote which is based on quests and adventure and I can show that to students to inspire them.

In order to keep my students on task, I do not want to provide a whole class to work on tutorials. Learners can pay attention to one activity for approximately twenty minutes at a time (Vander Zanden, n.d.). I will divide the class time to work on the project or tutorials between the two classes we have each week, that way it breaks up the activities we are doing throughout the class. In my experience students are more on task if they have task checklist, this way they can visualize what they need to do next.

**Outcome (Assessment)**

The criteria for assessment will consist of marks for Spanish language: the grammar, vocabulary, verbs and syntax. One of the criteria will be based on whether or now two cultural aspects are present in the game. In order to measure the student’s learning from constructing a game five criteria from the “Video Game Higher Order Thinking Evaluation Rubric” will be utilized from Rice (2007). The assessment criteria will consist of the following six items: the game has a complex storyline with characters’ users care about; has a storyline, offers meaningful interaction such as dialogue with NPC; requires gathering of information in order to complete; offers simple puzzle, has complex puzzles requiring effort to solve (Rice, 2007). The other two game criteria that I would add is the ones that of originality and of engagement, does the game have an original aspect to it and is the concept of the game fun and engaging. The assessment of the game design would appear as such: absent, emerging or evident. The main aspect of the game would be the grades coming from Spanish Language because this is the focus of the class not Computer Science. I would also do an anonymous class survey that asks the students to rate how much fun the project was, if it was rewarding, if it was challenging and I would ask for comments. If they did not like the project, what would they have preferred. If more than or equal to 70% of the class enjoyed some aspect of the project (Carbonaro et al., 2010) I would consider that as successful.

A measures that demonstrates that the SCRATCH project is a success would be if some of the students from the class decided they want to continue creating games in SCRATCH. The students might take another game building course to learn more or they start a Gaming Building Club.

**Reflection and Rationale**

“The constructivist learning environment is one where the learning is active, controlled by the student, builds upon prior knowledge, and is grounded in meaningful contexts.” (Evans & Barbour, 2007, p. 782). Constructionism allows for the student to demonstrate their constructivist learning by creating a tangible object. The fact that a person creates their own personal object provides a greater meaningful learning experience, compared to studying another object someone else has created (Carbonaro et al., 2010). One study demonstrated that students preferred writing interactive stories than writing in the traditional sense (Carbonaro et al., 2010), if we can provide students with more interactive opportunities such as game construction they will rise to the occasion and enjoy learning,

Motivation to learn a language in secondary schools is not very high. One study found motivation to learn a second language to be below 50% (from a sample of 151 students) in post-secondary where you pay to go to school however, fun is a factor that increases motivation to learn a language (Bernard, 2010). Games have been shown to be motivating factors for learning because they entice curiosity and make the learning context more meaningful (Hsu & Chiou, 2011). I wanted to incorporate game construction in my classroom to potentially increase motivation to take the Spanish Second Language course. When creating a game not only are students thinking of the graphic design and coding, they also have to contemplate the player’s thoughts and experiences and which elements need to be added to challenge the player. Not only is the student fully immersed in creating the game, he has to look through the lenses of the player and create the game so that the player connects with the character and believes he has control of the game (Evans & Barbour, 2007). This is an interesting, non-traditional method of making students being aware of diversity and multiple perspectives because they have to unify these views to make their game enjoyable for others. One study demonstrated that students prefer writing an interactive story compared to a traditional story, if we have the tools available to make learning more interactive and enjoyable, we should. We need to provide our students with opportunities to be constructionists, not merely use interactive tools but create something meaningful rise to the occasion and enjoy learning,

Recent government initiatives such as Inspiring Education (2010) have identified that they want classrooms to be more student-centric, where students learn skills such as problem-solving, they want technology to support the creation and sharing of knowledge. These skills are in high demand in the twenty-first century because every job involves navigating a complex, ever-changing, digitally networked global landscape, where many of the future jobs have yet to be invented (Gershenfeld, 2011, p. 55). Game construction is one method to incorporate all these new learning competencies. In order to create a functional game, students have to experiment, collaborate with peers and mentors, problem-solve by analysis of individual inputs that effect the whole (Duncan, 2010). By introducing game construction in secondary education, we provide students with an opportunity to experience STEAM learning, perhaps to even pursue a career in the field which is in high demand. Overall, I believe that incorporating a constructionist approach where the students are learning Spanish and creating games, is a fun and engaging process that leaves them with a project they are proud of. Often times, students either do not care about school, or only care about grades therefore we have to implement authentic tasks and problem-based learning in order to challenge students in meaningful and fun ways.

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