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EVALUATING A PROJECT-BASED LEARNING APPROACH TO THE BGSU BUSINESS
CURRICULUM

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HONORS PROJECT

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Abstract

Inspiration for my honors project came from an assignment that I completed in a previous marketing course. This assignment is the only experience that I have had with project-based learning, but it certainly made an impact on me. My honors project presented the perfect opportunity for learning more about project-based learning and the way it is used in educational settings. In addition to the benefits and challenges associated with project-based learning, I also researched the characteristics and learning styles of millennial students to understand whether project based-learning is compatible. In conclusion, I evaluated how project-based learning could be utilized in the curriculum for the BGSU College of Business. Through extensive research and my personal experience I recommended that the College of Business implement a project-based learning program and made suggestions and future recommendations pertaining to such a program.

Project-Based Learning

Project-based learning is defined as “a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to a complex question, problem, or challenge,” according to the Buck Institute of Education (BIE) (“What”). The Buck Institution for education is a non-profit organization with a mission to help educational institutes to use project-based learning by providing tools and expertise (“About”). Essentially, this type of learning presents students with real world problems, requiring them to apply prior knowledge and encouraging them to acquire new knowledge in an attempt to solve the questions they are provided (David). Project-based learning is used as a means of engaging students in ways that traditional teaching methods do not. Some studies show that project-based

learning appears to be a better educational approach than those generally used in the classroom (Cho). Other studies have shown that the professors who were overseeing the projects saw improved student learning and engagement from the use of project-based learning. Professors using project-based learning approaches observe that students are more engaged and become passionate about projects when they know they are helping someone from the community (Lee).

Criteria for Effective Projects

In order for project-based learning to be effective, the projects that are used must meet certain criteria. More specifically, BIE educators have created a list of seven essentials for project-based learning, comprised of the following:

1. Projects should be aware of the students' "need to know." In other words, the projects have to involve a topic that the students feel is important for them to understand and is something that they find intriguing.
2. A "provocative, open-ended, and complex" driving question should be presented to the students to inform them of the project's purpose.
3. Students should be provided with some choice in the structure or specific topic of the project.
4. Incorporating 21st century skills, such as collaboration and technology, into the project should be done as much as possible.
5. Educators need to encourage student inquiry and innovation throughout the project.
6. Constant feedback and revision should take place to promote successful completion.
7. Students should be required to present their projects as a means of improving an array of skills (Larmer).

Project-Based Learning and Millennial Students

It is important to consider the educational desires and needs of Millennial students when looking at existing or potential teaching methods. This is because Millennial students make up the current and future population of college students. Millennial students include individuals who were born between 1981 and 2004, and they have specific expectations when it comes to the classroom and how they prefer to learn (Novotney). Because of the world they have grown up in, they hold special values and personal traits, often contrasting with those from prior generations (Bart). Such characteristics include team-oriented, confident, achievement-oriented, relaxed, and sheltered (“Teaching”). Educators must take these preferences and characteristics into consideration when choosing teaching methods and designing coursework to ensure that students are learning and engaged. Project-based learning encompasses many of the 21st century skills that Millennial students need to know.

Many qualified individuals have made suggestions pertaining to how teachers can most effectively engage Millennial students. For example, Millennial students value relevance, thus they would rather learn something that applies to their life or will in the future (Bart). Information for “information’s sake” is no longer something that will engage students in courses. Educators must put forth effort to make content relevant and challenge students to find a deeper meaning from the information they are given (Bart). Professors should incorporate real life examples into the course content to keep the course relevant as well. Studies claim that learning reaches a higher level when students become involved outside of the classroom into a real world environment that demonstrates the concepts they are to be learning (Liu). Students see the relevance of projects when they involve an outside organization and professors do not need to encourage students to become interested in what they are learning (Lee). When educators show interest in the Millennial students’ learning needs, the students will likely notice and appreciate

the effort (Novotney). Project-based learning is certainly one way that educators can bring relevance into courses in order to get their students interested. Students can be asked to solve real world issues, using their prior knowledge and the material that they will learn in the course, which is the primary initiative behind project-based learning (David). Project-based learning allows students to “investigate authentic problems.” This makes course content more relatable, by providing an opportunity for application, which is exactly what Millennial students are looking for (Cho). As will be discussed in more detail later, businesses can bring their issues to the university which allows students to work with relevant material that may better prepare them for their futures.

It has also been suggested that because Millennial students have been on countless teams and part of numerous groups while growing up, they will tend to be more successful learners when collaborating with classmates (“Teaching”). Likewise, Millennial students enjoy an active learning environment which includes “group projects and cooperative problem-solving” (“Teaching”). Project-based learning offers students an excellent opportunity to work with peers to complete an assignment, as most projects that are completed in courses are done in groups of two or more people. It allows students to collaborate and “learn from each other as they co-construct knowledge” (Whatley). The teamwork that is provided through project-based learning should be helpful to the learning success of the Millennial students. One example of a group project connected a small business with a local university. Four students from Washington State University Vancouver collaborated to form a marketing and promotion strategy for Clark County Cleaners, a local dry cleaning business (Oliver).

The exploration of new teaching methods and the addition of multimedia content delivery are other ways that educators can meet the preferences of Millennial students (Novotney).

Today's students are beginning to value lecture-based courses less than they have in the past. Students are more engaged and learn better when social media, videos, and other innovative learning tools are incorporated into their courses (Novotney). The "personalization and customization of assignments" including creative assignments is what Millennial students need to keep them interested (Novotney). Project-based learning aligns with the values and characteristics of the students and it is an acceptable option for educators to use when trying to change the monotonous, traditional methods of teaching. When introducing a project, professors can use a video or guest speaker which will likely be more intriguing to students than a large, intimidating stack of papers to explain the assignment (Larmer). Additionally, project-based learning places large importance on a strong driving question. This question will create interest among students and should be open-ended and challenging (Deegan). Students will be able to design creative and personalized solutions to the problem if they are asked a well-developed driving question. Thus, project-based learning provides educators with an alternative style of teaching that is likely to be pleasing to the students involved.

Additional Benefits of Project-Based Learning

There are numerous benefits that arise from the use of project-based learning, in addition to the fact that it aligns with the learning desires of Millennial students. One such benefit is that students participating in project-based learning often become more engaged and interested in the assignment that they are completing (Lee). Some research suggests that learning outcomes are slightly better through the use of active learning styles such as project-based learning (Jollands). According to one study of project-based learning in a business course, the students gained a better understanding of the concepts that were being taught through the project as opposed to the other course concepts that were taught in a traditional format. The students were much more

engaged in the project portion of the class and had overall better scores on exam questions covering the project topics (Ozpolat). In another study, many students gave positive feedback after the use of project-based learning in their course, claiming that they gained a better understanding of the course concepts and became more knowledgeable in the discipline as a whole (Liu).

Perhaps most importantly, project-based learning prepares students for employment after college. With project-based learning, students are able to complete more practical assignments that give them a taste of being on the job. Some of the skills that employers expect college students to have include teamwork, communication, planning, and creativity (Whatley). Project-based learning may better prepare students for their future employment (Whatley). In the business world, effective communication is one of the most important skills that people must be proficient in to ensure success (Paulson). Students are expected to communicate a great deal when completing projects with outside organizations. For example, they must communicate with teammates, professors, and company executives and they may have to do a presentation, which is another form of communication. In addition, it is vital for students to be proficient critical thinkers when entering the workplace because it is a crucial skill that employers expect students to have, but not something that they teach on the job (Paulson). When problems have more than one answer, critical thinking skills are demonstrated at the highest levels (Paulson). Project-based learning often does not lead students to find a single, correct answer; instead students have to be creative and find the best solution that they can (Paulson).

Many students appreciated the opportunity to work with the clients from the businesses that their projects were assisting. They felt that the real world experience that was gained in the situation is difficult to achieve in a regular classroom setting (Whatley). Effective relationships

between students and company representatives are extremely valuable to the students' situation after college. Because students working with a company are solving real problems, there are characteristics that cannot be found in a made-up, hypothetical problem. One such characteristic is the fact that real problems are constantly changing. A project where new information can become available and change everything, allows students to experience a multidimensional problem that they may face as an employee of a company (Liu). Getting feedback from a business person is another advantage of working on a real world project. Students can adjust their presentation and communication style to meet the desires of employers (Liu). Furthermore, project-based learning is a good way for educators to reach students who learn in different ways. Project-based learning encompasses more than one different learning style through researching, problem solving, and communicating results. Many students learn through different learning styles, so projects allow all students to have a chance to excel ("Why").

Personal Experience

My interest in project-based learning was sparked by an experience that I had with the learning style in a marketing course. The class was split into teams with the primary objective of creating a marketing plan for a small, local company. A company representative, one of the few employees, met with the class to provide a background of the company and the products that we were marketing. The company representative and professor of the class worked together to create a project that met the needs of each. My professor included relevant course material in the project, while making room for creativity and expansion upon basic concepts. There were two distinct assignments embedded in the project, the first was a stepping stone for the second and a means of keeping us on track. The second assignment was much larger, including a presentation of our findings and ideas for a marketing plan. The project was a competition between the

groups of each class, where the winners were given gift cards. The representative chose the marketing plan that he liked best and found most reasonable given the constraints of the company.

I personally enjoyed this project and thought that it was a memorable learning experience. Not only was it fun and more engaging than lecture, but I also felt that I gained a better understanding of some of the course concepts. Rather than just hear about marketing research, I was able to conduct my own research while dealing with a real world problem. This required me to actively apply the information I was taught via lecture. My group became passionate about the work and strived to do our best because we knew that the project could ultimately affect more than just our grades. Knowing that I was helping a real business, as opposed to a hypothetical case, definitely made me appreciate the project. The project has stuck with me throughout my education and I would love to have done this in more courses because I believe it is an invaluable experience.

Challenges of Project-Based Learning

There are many benefits associated with project-based learning and those involved, but nevertheless there are challenges that are often realized as well. Although project-based learning is a way for students to practice teamwork and the collaboration process that comes with a group, there are large differences between the teamwork in education and employment (Whatley). Educators and scholars are working to improve the simulation of teamwork that can be found in an employment setting. As the similarity between teamwork in the two settings gets closer, the students will have a more beneficial experience and be more prepared for employment (Whatley). From a student perspective, project-based learning has some downfalls associated with the nature of teamwork. Naturally, when people are expected to work together there are

issues that arise such as failure of some team members to cooperate and difficulty in finding a time to meet as a group (Whatley). Along the same lines, there must be a balance between group and individual work and assessment throughout the project, and this is something that can be challenging to achieve (Cho).

Another challenge of project-based learning is connecting the course content to the real world problem being used. Educators often have to dedicate a lot of time to make a strong correlation and to prepare the project for students (Ozpolat). It may take professors more time and effort to use a project-based learning approach as opposed to a more traditional style of teaching, but if done correctly it will likely be worth it due to the positive outcomes of project-based learning. This leads to the fact that professors must be trained to teach in a different style of classroom. The task of creating a project while working with an external contact and assessing a more subjective assignment is something that not all educators can achieve (Cho). This is not to say that the number of professors who can use project-based learning is extremely limited; however, it is necessary to acknowledge the extra work and different responsibilities that professors involved in project-based learning may encounter (Cho). The amount of time spent on teaching material versus monitoring progress and coaching students will drastically change, as more will be dedicated to the latter in project-based learning (O'Neill). Moreover, when project-based learning is first introduced, professors may experience some resistance from students. This is largely attributable to the fact that it is unfamiliar and quite different from the lecture-based courses that they are accustomed to (Lee).

Community participation for project-based learning is an additional challenge that is often encountered (Lee). It is important that businesses are aware of the program in order to generate interest and participation. Businesses may not be inclined to contribute to the program

if they don't see a benefit of the time and resources that they extend. Without involvement from outside organizations, such a program would not be functional. Despite the difficulty, there are numerous ways that the existence of such a program can be communicated to businesses.

Business Schools Using Project-Based Learning

Project-based learning programs have been designed and used among universities and business colleges. Among these universities are Rowan University, Wright State University, and Illinois State University. A well-established program at Rowan University gives local businesses an opportunity to express a need for student help through a "Project Request Form". According to the problem, a project is then created for students to work on. The program's website lists the responsibilities for both organizations and students, provides a link to completed projects, and shows organizations who have participated in the past ("Project"). Another comparable program can be found at Wright State University. This business college's website provides businesses with instructions for how the program works, identifies courses or subjects that projects may relate to, and presents sample projects ("Faculty").

The Illinois Small Business Development Center at Illinois State University gives students an opportunity to assist local businesses, as they have a large focus on entrepreneurship. This program stresses the importance of connecting and building relationships with companies in the community ("Illinois"). In addition, the University of Delaware promotes problem-based learning, which is very similar to project-based learning, throughout their entire undergraduate program. This earned the university an award, recognizing them for enhancing undergraduate experience. The website provides information and resources about their use of problem-based learning ("Problem"). These universities have had success with project based learning and they could be an excellent resource for establishing a program.

Recommendations

The question that must now be answered is whether project-based learning has enough benefits to be used in the curriculum for the BGSU College of Business. After much research regarding project-based learning and reviewing the use of it in many contexts, it can be concluded that project-based learning offers enough benefits that the BGSU College of Business should incorporate project-based learning methods into its undergraduate curriculum. As previously discussed, the benefits of project based learning include the following:

- Embraces the desires and 21st century skills of Millennial students
- Increases student engagement
- Prepares students for employment
- Provides students with real world experience

This could potentially be done through a project-based learning program where local companies' problems would be used to create projects for students to complete in certain core courses. Creating such a program requires time and resources, but the many benefits that can result from proper implementation should be greater (David).

In addition to the countless benefits associated with project-based learning, this style of learning corresponds to the mission statement of the College of Business. The College of Business strives to provide an interactive and experiential learning environment (“Mission Statement”). Project-based learning is a form of experiential learning that would allow students to work together and with businesses in the area. Additionally, College of Business graduates should have the “ability to communicate clearly and to identify and solve problems critically, creatively, and ethically” (“Mission Statement”). Project-based learning gives students the opportunity to do just that; when asked to solve problems for a local business, students would

certainly need to demonstrate critical thinking as they come to a creative solution. Lastly, the College of Business claims to engage students throughout their education, and project-based learning would enhance that (“Mission Statement”). Increased student engagement has been found in many studies of project-based learning, so incorporating a program into the students’ curriculum would add value to this statement.

Following are a few recommendations that may be helpful to the BGSU College of Business with regard to how the project-based learning program could work. Groups of students in a class would be working on creating a solution for the same problem. Professors and company representatives can structure the project so that groups would be competing against each other. This would be done as a means of motivating students to give their best effort, which would likely lead to higher-quality work (Ozpolat). Not only does this encourage competitiveness, but it also allows the client to receive suggestions and ideas from many students and viewpoints (Liu). Offering extra credit or cash rewards for the best group performance would essentially help the companies because they would receive expertise and suggestions from motivated students.

Another recommendation is for the College of Business to obtain feedback from all parties involved including students, professors, and company representatives (Whatley). Then, with this feedback the College of Business should make adjustments to the program accordingly to ensure that it is serving its purpose and achieving its goals. Additionally, it is important that progress is measured throughout the project. The inclusion of milestone assignments, such as a paper summarizing progress halfway through the project, will keep students on track and ensure a balanced workload (Ozpolat). Weekly assignments and discussions will keep students focused and get them better prepared for the final submission and/or presentation (Liu).

Future Considerations

Should the College of Business adopt a project-based learning program there are some important things that should be considered. One such consideration is the assessment and means of grading the projects. It may be difficult to measure student performance and learning outcomes through a subjective project as opposed to straightforward quizzes and tests. Professors have found that assessing projects are more complicated because of the use of groups and the presence of abstract concepts (Lee). Some studies provide helpful tools as to how educators can design exam questions and grading criteria to judge how well students learned the material through the project (Liu).

The BGSU College of Business would also need to consider how they would implement and who would be involved in the implementation and maintenance of the project-based learning program. It would likely take a committee, made up of several individuals, to design the program and create awareness throughout the community. Some of the primary responsibilities for these people include communicating with businesses, determining which courses would be suitable for using project-based learning, and pairing a business's problem with the appropriate course. This may take some time from those involved with the implementation, and more effort will likely be required from the College of Business in the early stages, until the program becomes established.

Not only can the College of Business connect with local companies to find project opportunities, they can also encourage professors to get involved in national projects that relate to a specific course. There are numerous national projects in a variety of specializations that the BGSU College of Business students can become involved in through a course (Ozpolat). National projects can lead to university, student, and professor recognition in the case that a

project is successfully executed. For example, students may be featured in the local media and professors may receive rewards for their part in the project. Students receive the benefit of being able to place the opportunity on their resumes as well, which provides the students with a positive experience to discuss with potential employers. Good publicity for the university can result from students achieving first, second, or third place in a competition (Ozpolat).

Overall, the implementation of a project-based learning model in the BGSU College of Business would benefit the students involved and the University. A project-based learning program is compatible with the learning styles of Millennials and would present the BGSU College of Business students with an opportunity to work with real world businesses. In addition, it would provide the College of Business with an innovative way to connect with the business community and offer a unique student learning model, which could result in increased student enrollment and more media attention.

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