

Proposal Name: Stargate to Innovative Learning Lab Center (ILLC)

Project Justification:

Introduction and Statement of need:

Centro de Desarrollo Integral CeDIn - Laboratory School Metro Campus (CeDin) is a nonprofit educational institution geared towards the development of the student as a whole. The student is placed at the center of the educational process and is motivated and encouraged to: explore, research, solve problems and make effective decision-making. The school has developed an excellent program in Environmental Education which is the center of the curriculum development for the middle school grades, 7th and 8th. Among the projects that have been developed, there are a butterfly- rearing project, an herbarium, a recycling project, an orchard, a composting project and the salvage of an ecosystem through which studies of water and soil surveys have been done. These projects were performed in collaboration with various universities, companies and organizations. In addition, they were initiated by Ms. Yadira Vazquez, a nationally recognized science teacher. The success of these future projects highlights the importance of building up the technological tools the school has. CeDIn requires reconfiguring the actual space of the library in which the 7th and 8th grade students can expand their possibilities to research, explore and create using technology. This reinforcement will help the school meet the students' interest in the sciences, technology, engineering and math (STEM) areas. The school visualizes the transformation of the library as a special place where students can expand their knowledge using forefront technology together with the librarian, teachers and other visiting resources. For this purpose, CeDIn is requesting funds to establish an Innovative learning lab center.

A Learning Lab is described as follows: *Innovative spaces that prepare youth to meet the challenges of a complex global economy and gain the skills they need to succeed in a rapidly changing world, while allowing them to follow their passions and to inspire one another.* Subramaniam, Ahn & et al (2012) note on the potential school libraries have to serve as hybrid spaces to foster the teaching of STEM. According to a report published in 2014 by the Association of Science- Technology Centers, in Learning Labs, students gain experience with technology and digital media in ways that help them express, create, and connect with their interests.

CeDin library has supported student development throughout the ten years of school existence. As technology has advanced and student priorities have shifted there is a challenge in keeping up with them. As the school has been incorporating Science STEM- projects it has detected a need for strengthening students' creativity and critical thinking and library online research skills. In addition, students will strongly benefit from coaching and mentoring experiences of STEM experts.

Description of the community:

CeDIn is a laboratory school associated with the Deanship of Education and Behavioral Sciences at Inter American University Metro Campus (private, nonprofit). It holds the Puerto Rico Education Council Authorization License for Elementary and High School levels and the License of the Family and Child Services Department for the pre-school level. At present, the school has an total enrollment of 920 students (20 students per classroom) in Elementary and Middle School.

Current Status of library services:

The library offers orientation services in the search and retrieval of information, the use of the database and provides access to reading and knowledge to our school community: students from Pre-Kinder to 8th grade, teachers, undergraduate trainees and parents. It has open collections for users and students can check-out books for a 7 working day period. The 7th and 8th grade students have an assigned one-hour weekly visit called Study Period.

During the school year, the library celebrates various activities such as: Book Fair and Reading Marathon. The library also performs curriculum integration activities with the different subjects and grades levels, becoming an extension of the classroom.

Proposed Approach:

Being a Laboratory school, CeDIn students' curiosity and investigation is part of their everyday life. We aspire to provide daily opportunities for learning that prepares them for the constant changes in technology and for the development of 21st Century skills. Considering this, we propose the establishment of the Innovative Learning Lab Center (ILLC), which will effect a transformation of the school Library Practice. Pedagogical strategies like project based learning and guided discovery will be an intrinsic part of the new library space . Studies have proven that when implemented well, project-based learning (PBL) can increase retention of content, and creativity and improve students' attitudes toward learning, among other benefits. (Strobel, J., & van Barneveld, A. (2009). The ILLC will be a place to create dynamic and experimental content, providing the school community with the knowledge, the space, and materials needed to foster research and STEM knowledge.

Project Benefits:

The project will provide rapid access to information, technology integration, and advanced digital media to faculty, students, the external community. This program is more environmentally friendly since it reduces resource utilization; it brings flexibility to students and encourages independent work.

Project align with the goals of the initiative, the selected category, and the selected agency-wide goal:

The propose project will be aligned with the promotion of lifelong learning goal and with the inter-disciplinary and inquiry-based learning methods. It will also aligns under the Transforming School Library Practice category. The project will be used as a backbone for the following initiatives:

- Purposefully integrating information technology and digital resources in ways that support media creation rather than consumption, informed by pedagogical approaches such as experiential learning, project-based learning, inquiry-based learning, and guided discovery;
- Reconfiguring space in learner-centric ways to support the development of 21st Century skills and literacies, informed by disciplines such as design thinking or user experience;
- Deepening meaningful instructional collaborations between school librarians and classroom teachers or school administrators.

Project Work Plan:

Goals, Objectives and Specific Activities:

Duff mentions in 2012 that “the school library is a large classroom with all subject resources, but there must be emphasis in areas where students need additional tutoring, mainly in math and science”, taking this into consideration, CeDIn would like to reinforce those areas in its library with materials and experiences that promote research and action as part of the curriculum. In an effort to organize and prioritize the needs, the director and program coordinator will meet with faculty to coordinate activities that will take place monthly.

The library will perform monthly and yearly user opinion surveys (students, parents and teachers) and the evaluations of daily planning or unit planning of teachers, to measure the impact of those activities in the students' academic achievement.

Goal: Transform the library to meet the needs and interests of the 21st century students.

Objectives	Activities
1. Transform the library in a center for the acquisition of knowledge following a format that fosters creativity and encourages critical thinking.	Design and coordinate thematic unit centers that stimulate the creative development, problems solving and critical thinking skills.
2. Develop criteria to distinguish valid and reliable information.	Implement activities in which students can differentiate and identify trustworthy websites to use in their investigations.
3. Create a space where students can interact with STEM experts and other professionals in their fields	Develop workshops and informative talks through invited speakers.
4. Promote alliances with other information centers and companies.	Establish alliances with other information centers and companies.

Project Personnel and Other Resources:

CeDin- Laboratory School Metro Campus is a laboratory school affiliated to the Inter American University of Puerto Rico, Metro Campus (IAUPR-MC). The project will be managed by a Project Director, assisted by a project coordinator and an assistant director.

The Project Director (PD) -The project will be managed by Damaris Arocho, who will be the overall leader and responsible for the development, execution and management of the work plan, in charge of monitoring and ongoing progress on project tasks and objectives, preparation of reports and communications with partners and IMLS. She holds a bachelor’s degree in elementary education, librarian certificate, master’s degree in Science and Technology, certificate of Microsoft MIE and certificate as a promoter of reading by the SM Foundation.

The Project Coordinator (PC)-Yadira Vazquez holds a bachelor and master degree in Science Education and is in the process of completing a doctorate degree in Education Management and Leadership. She will be the program coordinator. The PC will coordinate day to day activities and experiences for the students. She will be responsible of developing STEM technological activities of the projects that developed in CeDin; the butterfly-rearing project, the herbarium, the recycling project, and the orchard project. She will also responsible of coordinating STEM workshops with STEM experts.

The Project assistant director (PAD) will be Ms. Ilene Morales. She is an experienced in instructional support developer who assist teacher in the development of technological materials. She has a Master degree in educational computer.

Partner organizations:

Partner organizations will form a network of academic and curriculum support in the integration and implantation of technologies in the classroom. These partners will offer the professional development workshops in STEM and 21st century skill areas as well as coaching and mentoring support for students.

San Juan Community Library is a non-profit organization that will provides services to the public and promotes reading and investigation by means of cultural enrichment. Forward learning is a company that promotes curriculum support in the integration and implementation of technologies in the classroom.

Project Risk and Mitigation Strategy

Project Risk	Mitigation Strategy
1. Infrastructure requirements changes	The current library space is more than adequate to support the ILLC
2. Weather threats	Infrastructure is secure and poses no particular weather risks in regard to weather threats.

Monitoring Plan and Evaluation Plan:

Monitoring plan

Project success will be monitored in the following ways:

A monitoring plan will take place during the course of the project that will consist in the analysis of the objectives and pre-established goals. Indicators of success include: Increase number of visits to the new library space or Learning Lab, increase number of visits to trustworthy websites related to academic topics, the establishment of alliances with other information centers and companies, and the number of STEM experts providing coaching and mentoring experiences to project participants.

Evaluation plan

The project director will be responsible for conducting annual internal project outcomes evaluation.

The evaluation plan will be based on surveys and satisfaction questionnaires administered to students, faculty members, and community members that will benefit from the propose ILLC.

Objective:

1: *To transform the library into a knowlegde acquisition center or learning lab with new technologies in order to reflect youth priorities and promote their creativity and critical thinking*

<i>Outcome:</i>		
<u>Measure:</u>	<u>Data Source:</u>	<u>Data Interval:</u>
Trends on library visits	Visitor Attendance Records	Monthly

Objective: 2: *To develop Internet navigation standards for students to access valid and trustworthy information.*

<i>Outcome:</i>		
<u>Measure:</u>	<u>Data Source:</u>	<u>Data Interval:</u>
Rubric	Interpretation of rubric scales, online visit logs	Twice a year

Objective: 3: To establish a space for STEM coaching and mentoring

Outcome:		
Measure:	Data Source:	Data Interval:
Workshops and mentoring visits	Satisfaction questionnaire	Quarterly

Objective: 4: To establish collaboration agreements with other libraries, media centers and technology education companies.

Outcome:		
Measure:	Data Source:	Data Interval:
Alliances with other information centers and companies	Letters of intents and attendance records	Monthly

Project Outcomes:

Project Intended Results and Outcomes:

Intended program outcomes include:

1. An increase of 60% of the trend of visits of the academic community (faculty, students, and external community members) to the library in order to transform it in a center for the acquisition of knowledge following a format that fosters creativity and encourages critical thinking.
2. To develop within the students the ability to distinguish valid and reliable information.
3. To establish learning, coaching and mentoring alliances with other information centers and companies.
4. The creation of a space where students can interact with STEM experts

Project Success, Benefits and Impact:

The project will impact the 7th and 8th grade students directly, giving them a hybrid space to create and investigate with advanced technology and guidance at higher levels of learning. As a result, the school community will benefit from their projects and creations, and library services.

Collecting and Reporting Data Plan:

Goal: Promote the transformation of the library through the acquisition of educational STEM related software and technology			
Outcome: Increase the participant attendance to the library and the acquisition of knowledge to improve student creativity and critical thinking using technological STEM related tools.			
Data Collection Measure	Data Source	Person(s) Responsible	Date
Students Surveys	Survey results	Damaris Arocho	May 2020 May 2021 May 2022
Trends on Library visits and engagement	Attendance Sheets	Damaris Arocho	May 2020 May 2021 May 2022
Trends on Experts visits for coaching and mentoring	Attendance Sheets,	Yadira Vázquez	May 2020 May 2021 May 2022

Alliances with other information centers and companies	Letters of intents and attendance records	Damaris Arocho Yadira Vázquez Ilene Morales	Sep 2020 May2022
--	---	---	---------------------

Dissemination of Project Results:

The ongoing findings of the project will be disseminated in the monthly meetings. At the end of the project, a project presentation will be offered at the Puerto Rico Private School Convention to present results and the lessons learned from the Project. In addition, the findings will be posted on the school website and the school weekly newsletter. Materials developed by the Project will be publicly available so that other programs can benefit from successful strategies and lessons learned.

Sustainability Plan for Continuing Positive Changes Beyond Federal Funding:

Continued sustainability after the Project period will be achieved with the implementation of the following strategies: a) Keep abreast of technological changes that will support the continuous upgrading of technological tools; b) Cover administrative, facilities and maintenance costs; and c) Provide continued collaboration with the community partners. CEDIn has available human resources trained in relevant disciplines whose expertise allows to serve student population needs. Once this project is completed, CeDin will integrate these practices as part of its ongoing programs.

