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Space Educational Portal

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Abstract-
Learning space research is a relatively young field of study that aims to inform learning environment design, evaluation, and management. This research examines a fragmented and dispersed body of knowledge about the linkages between university learning spaces and student learning activities. The report draws on this review to identify a number of key concerns and gaps in the literature. One of its main objectives is to pave the way for the creation of learning environment models that can be utilized by instructors, architects, interior designers, IT managers, educational leaders, and students who are participating in the design and evaluation of new learning spaces. Another purpose is to assist those involved in learning space research in locating and understanding each other's contributions. This portal investigates how recent research has revealed the impacts of virtual environment on learning, with the goal of presenting both a comprehensive picture of the current state of study and fascinating options for future work. It outlines five important themes that make up research in virtual space and learning, based on a multidisciplinary review: similarities between the study of physical space and learning; socio-cultural constructivist viewpoints; practical and theoretical pedagogy; architecture; and aesthetics. The current state of knowledge about how virtual space influences learning is patchy, to say the least. The key issue for the future is to build a research infrastructure that can take use of the diversity of present studies while also driving, focusing, and connecting future research endeavors.

Keywords: evaluation, fragmented, multidisciplinary, knowledge, space, influences etc.

1. Introduction

Space Education Portal promise to be an integrated point of entry that provides all stakeholders of an education body, frequently referred to as campus or university, with a single, personalized Web interface to all information and application resources in a secure, consistent, and customizable way (Kiviak, 2002) through multiple devices and multiple access methods that can be utilized to retrieve all appropriate information and learning resources anytime, anywhere, with anything. Hence, they allow more interaction and collaboration among students, faculty, staff, and alumni (Barratt, 2003). Properly implemented, portals can be a strategic asset for the institution. In that sense, they do far more than a traditional Web site of static information ever could (Strauss, 2002).

The promising opportunities notwithstanding, developing a Space Education Portal can be a key strategic technology decision since it can impact the entire campus community in the way it learns, teaches, communicates, and interacts. Therefore, the primary challenge for educational institutions in prior to the implementation of a portal solution is to develop a deliberate portal strategy based on a careful analysis of long term and short term needs and a clear vision with concrete strategic goals (Katz, 2000, 2002).

However, the international portal experience in the educational sector over the past decade shows that various strategies have been pursued in very different institutional environments and with very different objectives (Perraton, 2000). This has been driven to some extent by the fact that the portal concept as other technologies in open and distance learning (ODL) has been first applied and adapted to higher education and professional training environments, but also establishes gradually in primary and secondary education institutions (Owston, 1997; UNESCO, 2000).

Humans have always wondered about the nature of the objects seen in the night sky when they gazed up at the heavens. The development of rockets, as well as advances in electronics and other technologies in the twentieth century, made it possible to send machines, animals, and eventually humans above Earth's atmosphere into outer space. However, long before technology made these accomplishments possible, space exploration had captured the imaginations of many people, including not only aircraft pilots and scientists, but also writers and artists.

The strong hold that space travel has always had on the imagination may well explain why, in the words of Tom Wolfe in The Right Stuff (1979), professional astronauts and laypeople alike consent to sit "on top of an enormous Roman candle, such as a Redstone, Atlas, Titan, or Saturn rocket, and wait for someone to light the fuse." It may also explain why space exploration has been such a popular and enduring theme in literature and art.

As centuries of speculative fiction in books and, more recently, films demonstrate, the human spirit took "one small step for a man, one giant leap for mankind" many times and in many ways before Neil Armstrong stamped humankind's first footprint on the Moon.

The country's space science research is still being supported by the space programme. The National Mesosphere – Stratosphere – Troposphere Radar Facility (NMRF) near Tirupati is now fully operational, with the commissioning of

the remaining portion of the antenna array and associated transmitters for Mesospheric measurements. It is a useful tool for atmospheric scientists. Several space science experiments continue to use sounding rockets and balloon flights. The detection of a few Gamma-ray bursts by the SROSS-C satellite has given such experiments a boost.

The study of cosmic rays, astronomical investigation using space and ground-based systems, study of meteorites and lunar samples, and physical observations of the sun are all part of space science research. Another major area of interest is the study of the Earth's atmospheric system using rockets, balloons, and orbiting space systems.

There has been significant progress in the commercialization of the country's space capabilities. Antrix Corporation Ltd., founded in September 1992, has demonstrated promising results by securing orders for the study of satellite communication systems for INMARSAT, providing training to ARABSAT and Korean engineers, and supplying space hardware to the Brazilian space agency.

Therefore, looking at the development approaches, lessons, comments, and concerns from concrete projects, it is primarily the diversity that stands out. This article sheds light on those aspects that can serve as a common basis for an integrated, generic approach toward portal strategy. It understands the four directions of impacts on learning, teaching, communication, and interaction of education portals as strategic dimensions along which strategic goals are set and embedded in an institutional context.

2. Literature review

NASA gathers a lot of data - over 15 Terabytes per day! And by a White House mandate this data is free to the public - in a format useful to you. This is where the APIs come into play.

Figuring out the best way to distribute, use, and reuse NASA’s data is a problem. NASA’s APIs provide a solution by lowering the barrier of entry to people outside NASA to easily manipulate and access the public information.

Learning space research is a relatively new field of study that seeks to inform the design, evaluation and management of learning spaces. This paper reviews a dispersed and fragmented literature relevant to understanding connections between university learning spaces and student learning activities. From this review, the paper distils a number of core concerns and identifies some gaps in the literature. One of its primary goals is to clear the ground for the construction of models of learning space that can be used by the various parties involved in the design and evaluation of new learning spaces: teachers, architects, interior designers, IT managers, educational leaders and students. A closely related goal is to help those participating in learning space research locate and understand each other's contributions.

NASA is an abbreviation for the National Aeronautics and Space Administration. NASA is a United States government agency in charge of air and space science and technology. With the launch of the Soviet satellite Sputnik in 1957, the Space Age began. NASA began operations on October 1, 1958. The agency was established to oversee space exploration and aeronautics research in the United States. NASA is managed by the administrator. The president appoints the NASA administrator, who is then confirmed by a vote in the Senate.

Many people are familiar with NASA's work. But they have no idea how many different things the agency does. In space, astronauts conduct scientific research. Satellites assist scientists in learning more about the Earth. Space probes conduct research in the solar system and beyond. New innovations enhance air travel and other aspects of flight. NASA is also launching a new programme to send humans to the Moon and Mars to explore. Aside from those major missions, NASA is involved in a variety of other activities. The agency shares what it learns so that its knowledge can benefit people all over the world. Companies, for example, can use NASA discoveries to develop new spinoff products.

NASA assists teachers in preparing students who will work as engineers, scientists, astronauts, and other NASA employees in the future. They will be the explorers who will continue to explore the solar system and the universe. NASA has a long history of investing in programmes and activities that engage students, educators, families, and communities in the wonder and excitement of exploration. NASA provides training to teachers in order to help them learn new ways to teach science, technology, engineering, and mathematics. Students are also involved in NASA missions to help them become more interested in learning.

NASA's headquarters are located in Washington, D.C. The agency operates nine centers, the Jet Propulsion Laboratory, and seven test and research facilities across the country. NASA employs over 17,000 people. Many more people work as government contractors for the agency. These individuals are employed by companies that are paid by NASA to perform work. The combined workforce includes a wide range of occupations. Astronauts are the most well-known NASA employees, but they only make up a small portion of the total workforce. Scientists and engineers make up a large portion of the NASA workforce. However, there are many other jobs available, ranging from secretaries to writers to lawyers to teachers.

NASA began a human spaceflight programme when it was founded. The Mercury, Gemini, and Apollo programmes assisted NASA in learning about space flight, culminating in the first human landing on the Moon in 1969. At the moment, NASA astronauts are living and working on the International Space Station.

NASA's robotic space probes have visited every planet in our solar system as well as a number of other celestial bodies. Telescopes have enabled scientists to peer into the farthest reaches of space. Satellites have revealed a wealth of information about the Earth, resulting in valuable information such as a better understanding of weather patterns.

NASA has assisted in the development and testing of a number of cutting-edge aircraft. Among these planes are those that have set new records. These tests have helped engineers improve air transportation, among other things. NASA technology has influenced a wide range of everyday items, from smoke detectors to medical tests. NASA celebrated its 60th anniversary in 2018.

An application programming interface (API) is a connection that allows computers or computer programmes to communicate with one another. It is a type of software interface that provides a service to other programmes. An API specification is a document or standard that describes how to build or use such a connection or interface. An API is said to be implemented or exposed by a computer system that meets this standard. API can refer to either the specification or the implementation.

Web APIs, which allow communication between computers linked by the internet, are frequently referred to as APIs. APIs for programming languages, software libraries, computer operating systems, and computer hardware are also available. APIs were invented in the 1940s, but the term didn't catch on until the 1960s and 1970s.

In 2000, Roy Fielding's dissertation Architectural Styles and the Design of Network-based Software Architectures at UC Irvine outlined REST and described the concept of a "network-based Application Programming Interface," which Fielding contrasted with traditional "library-based" APIs. Beginning in 2000 and continuing through 2021, XML and JSON web APIs saw widespread commercial adoption. The web API is now the most commonly used definition of the term API.

Tim Berners-2001 Lee's proposal for the Semantic Web included "semantic APIs," which recast the API as an open, distributed data interface rather than a software behavior interface. Although proprietary interfaces and agents became more common than open ones, the concept of the API as a data interface gained traction. API has become a broad term describing much of the communication on the internet because web APIs are widely used to exchange data of all types online. When used in this context, the terms API and communication procedure have overlapping meanings.

The interface between an application and the operating system can be specified by an API. POSIX, for example, defines a set of common APIs that allow an application written for one POSIX-compliant operating system to be compiled for another POSIX-compliant operating system.

Operating systems that implement the POSIX APIs include Linux and Berkeley Software Distribution.

Microsoft has demonstrated a strong commitment to backward compatibility, particularly within its Windows API (Win32) library, allowing older applications to run on newer versions of Windows via an executable-specific setting known as "Compatibility Mode."

An API differs from an application binary interface (ABI) in that an API is based on source code, whereas an ABI is based on binary data. POSIX, for example, provides APIs, whereas the Linux Standard Base provides an ABI. Web APIs are defined interfaces through which interactions occur between an enterprise and applications that use its assets, and they also serve as a service-level agreement (SLA) to specify the functional provider and expose the service path or URL for its API users. An API approach is a design strategy that revolves around providing a programme interface to a set of services to various applications serving various types of consumers.

3. Proposed Plan of Work

The proposed plan of work initially includes selection where VueJs , Vuex, Axios frameworks for various works such as requesting API to NASA server then response fetching will be done after that data will be consumed in the application and finally UI based data will be updated. Then JavaScript will be used as a primary language for the related work. Vue (pronounced /vju/, like view) is a progressive user interface framework. Vue, in contrast to other monolithic frameworks, is built from the ground up to be incrementally adoptable. The core library is limited to the view layer and is simple to integrate with other libraries or existing projects. When combined with modern tooling and supporting libraries, Vue, on the other hand, is perfectly capable of powering sophisticated Single-Page app.

If you want to learn more about Vue before diving in, we made a video that walks you through the core principles and a sample project.

If you are a seasoned frontend developer interested in learning how Vue compares to other libraries/frameworks, see the Comparison with Other Frameworks.

Vuex is a Vue.js application state management pattern and library. It acts as a centralized storage location for all of the components in an application, with rules ensuring that the state can only be mutated in a predictable manner. It also works with Vue's official devtools extension (opens in new window) to provide advanced features like zero-config time-travel debugging and state snapshot export / import.

Axios is a JavaScript Promise-based HTTP client that can be used in both your front-end application and your Node.js backend.

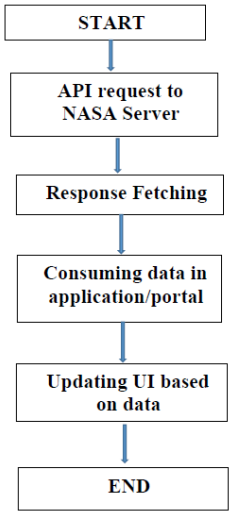
It is simple to send asynchronous HTTP requests to REST endpoints and perform CRUD operations with Axios. The Axios library can be used in a simple JavaScript application or in conjunction with more advanced frameworks such as Vue.js.

JavaScript is a scripting or programming language that allows you to implement complex features on web pages — whenever a web page does more than just sit there and display static information for you to look at — such as displaying timely content updates, interactive maps, animated 2D/3D graphics, scrolling video jukeboxes, and so on — you can bet that JavaScript is involved. It is the third layer of a layer cake of standard web technologies, the first two of which (HTML and CSS) have been covered in much greater depth in other parts of the Learning Area.

UI and UX design are two of the most frequently misunderstood and conflated terms in web and app design. And it's understandable. They're usually grouped together in a single term, UI/UX design, and on the surface, they appear to describe the same thing. It's often difficult to find solid descriptions of the two that don't devolve into jargon.

"UI" stands for "user interface" in UI design. The user interface of an application is its graphical layout. It consists of the buttons that users click, the text that they read, the images, sliders, text entry fields, and all of the other items with which the user interacts. This includes the layout of the screen, transitions, interface animations, and each and every micro-interaction. Every visual element, interaction, and animation must be designed.

Flowchart: -



4. Aim & Objective

APIs provide an interface for machines to talk with each other. NASA’s APIs allow developers to use NASA’s data, such as imagery, for application development. Will provide a framework which will give the information about planets, satellites, moon, rockets, and asteroids. Will integrate all the data related to space in one portal which will be beneficial for students to gather the notes from one point.

Navigating all of NASA's APIs, on the other hand, is a little difficult. NASA has 62 (!!) public APIs, according to Programmable Web.

While NASA's API developer portal and articles like this are helpful, we decided to create a NASA API package that combines some of the coolest API features into a single wrapper. With our NASA API package, you can call the API directly from your browser and then export the code snippet in your preferred language. Check it out for yourself if you're eager to start coding. Otherwise, here's a rundown of some of its features:

With the getPictureOfTheDay endpoint, you can get a picture of the day with a description from a NASA astronomer. You can also hear sounds from space with the getSpaceSounds endpoint. Image retrieval from the Mars Rover Find and track asteroids based on your location, a date in time, or a combination of these criteria

Retrieve NASA patents by category

Return NASA Earth imagery by location

Using NASA's EONET, you can track natural events such as storms (Earth Observatory Natural Event Tracker) One of our favorite aspects of NASA's API is how open it is. The majority of its functions do not even necessitate the use of an API key. If you want to use a function that requires an API key, simply fill out this form with your name and email address. We'll use the get Picture of the Day endpoint today. One of NASA's most popular public API calls is Astronomy Picture of the Day (or APOD). In fact, with 3.5 million views per month, NASA's website displaying the APOD is consistently one of the most popular in the federal government. Click the get Picture of the Day link, then "Test Function" to see the picture of the day for today.

The Indian space programme, which aims to provide self-sufficient space-based services to the country, reached an important milestone on October 15, 1994, when the 283-tonne, 44-meter-tall Polar Satellite Launch Vehicle (PSLV-D2) successfully completed its mission by placing the 804-kg Indian remote sensing satellite, IRS-P2, in the intended polar sun-synchronous orbit. As a result, India has joined an exclusive group of only six nations in the world to accomplish this multidisciplinary, technologically complex feat.

Even as PSLV-D2 unequivocally demonstrated India's capability to launch indigenously built remote sensing satellites, the mission also demonstrated in flight a number of systems that will be used in the Geosynchronous Satellite Launch Vehicle (GSLV), bringing the country closer to achieving the capability of launching INSAT class communication satellites as well.

The INSAT-2C and IRS-1C satellites were successfully launched and placed in orbit in 1995. The PSLV-next D3's development flight is scheduled for 1996.

On May 4, 1994, the fourth developmental flight of the Augmented Satellite Launch Vehicle (ASLV-D4)

successfully completed its mission by launching the 113 kg SROSS-C2 scientific satellite into a near-Earth orbit. With this success, all of the ASLV project's objectives, including proving in flight a number of complex vehicle systems used for PSLV and GSLV, have been fully realized.

Significant progress has also been made in the development of the GSLV, with a number of advanced technologies being qualified and the fabrication of the majority of the vehicle hardware having begun. Another significant accomplishment is the successful development and qualification of the silicon phenolic throat for the GSLV liquid propellant engine. The GSLV's L-40 liquid propulsion stage is now preparing for qualification.

5. Future Scope

The following are the expected outcomes, Get a picture of the day with a description from a NASA astronomer Hear sounds from space Find and track asteroids based on your location, a date in time or more Track natural events (ex. Storms)

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