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**School of Information Technology & Engineering (SITE)**

**FALL 2017-18 SWE398-SUMMER PROJECT**

**REVIEW-1**

**“E-Learning Website”**

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**Signature of the guide**

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**1. INTRODUCTION**

**Project Title :**

“E-Learning Website”

**Problem Statement :**

"Using e-learning technologies to develop engaging activities and content to help people learn English and improve their speaking, listening, reading and writing skills."

**Project Abstract :**

"Listening, Speaking, Writing, Vocabulary and Grammar are the major parts of learning any language. English being the most globally used language, it is important that everyone is proficient enough to be able to compete on a global level.

To support this idea, we need to make English easy to learn and easily accessible by everyone. E-vidya is a platform where professors and content creators are allowed to put up Lessons and Activities and students get to learn English in an engaging manner."

**2. LITERATURE SURVEY**

**Introduction :**

“A project is a problem scheduled for solution” a definition by Dr. J.M. Juran. As in any organization, every department is set up and designated with specific functions in order to perform its business or purpose for that organization. Regardless of their structures, according to William R. Ducan –Director of Standards from a Project Management Institute in Pennsylvania, works which are performed in an organization are basically categorized into two characteristics: operations or projects (Duncan 2000, 6). Due to the similarity between the two aspects such as: they are both performed, planned, executed by people in the organization; operations and projects are usually mistaken or named interchangeably. In fact, they are fundamentally different in terms of their nature and time, which is the one of the keys of success in every business. Operations are repetitive and mostly orientating pre-defined, in which their existence goes along with the existence of businesses and their frameworks are specifically pre-programmed for any departments in any businesses. Whereas, projects are classified as temporary with definite start and end dates; they are uniquely different for every product or service. “A project is a temporary endeavour undertaken to create a unique product or service”. Projects play crucial roles in an organization’s business strategy. In regard to a project’s purposes, they can be established to cover any areas in business dimensions like a correction, problem solving, development, campaign and so forth. Projects are also determined as progressively elaborated. In this context, progressively points to the “proceeding in steps, continuing steadily by increments”, and elaborated is when the projects are “worked out with care and details, developed thoroughly”

**RELATED WORK :**

**MAJOR ISSUES FACED**

Restrictions and Weaknesses of Analytics Analytics can be considered an emerging and immature discipline in the context of universities . It is true that a high amount of analytical systems have been implemented, are being developed or planned, but in some aspects they denote immatureness. Immatureness because it is easy to find similar analytic initiatives which are redundant in some points, other initiatives are isolated and only give response to the necessities of a given subject and/or teacher, most initiatives are not aligned with the strategic goals of the university and, in general, it seems that a lot of investment are focused to analytical projects with short duration. In addition, validation of whether the created systems answer the motivating analytical question is usually not performed; neither the evaluation of what is the impact of the system in the university. There are also few systems that propose indicators to measure the tangible and intangible benefits of developed systems for the university, their members (students, teachers, researchers, etc.) or their collaborating institutions. These weaknesses denote not only flaws in the analytical systems created, but also in the way in what they are planned, created and evaluated. Therefore, it is important to define what weaknesses refer to the systems and what to their project management aspects

Weaknesses Related to the Way Project Management is Conducted when Planning, Developing, Implanting and Evaluating Analytic Tools From a project management perspective, the problems faced in different disciplines of analytics are also different.

**Weaknesses related to Action Analytics/Academic Analytics projects are**

• Resistance to change related to the impression that some academics may have about the loss of their autonomy.

• Complexity in the structure of the university (campus, research institutes, innovation institutes, departments, academic programs, etc.).

• Few experience in the development and implantation of analytical system.

• Use project management methodologies in the development of BI systems in enterprises as a basis. These systems are focused to measure productivity and benefits. It would be reasonable to use a new (or adapted) methodology in the context of universities, with new indicators less focused to lucrative aspects.

**Weaknesses related to Learning Analytics project are**

• They are not sponsored or lead by the institution.

• They have not started from the strategic planning of universities.

• They are not integrated into the global information systems of universities: they use to be local projects (usually focused on a given subject or classroom) and related to particular teacher initiatives and necessities.

• They remain centered on a perspective of analytics as a technology, as a tool, and as a means to measure and not as a service.

To extract the valuable information from the large and heterogeneous datasets increasing at a high speed, a reliable system having extremely low latency and ability to support real-time, needs to be developed.

To improve performance in an in-memory data management and processing systems the following aspects are researched:

1. Indexes
2. Parallelism
3. Transaction management/Concurrency control Formatting
4. Query Processing
5. Fault Tolerance
6. Data Overflow

A wide array of research has been dedicated to experimenting in the industry which helps to establish validity and support generalization towards real world application of the theoretical software engineering concepts [6]. Various model for academia industry collaboration and their effectiveness has been described in [12, 13, 15]. In [12], Petersen et al. reports Action Research (AR) – an iterative improvement model, is promising for carrying out industry-academia collaboration.

**APPLICATION :**

The studies and research carried out by different groups of people and the various papers published have given us an extended knowledge of the application of data analytics in the domain of project management. The consolidation of these intellectual documents with our own input aids our attempt to create a system that will enable the prediction and initiation of projects.

**3. SYSTEM DESIGN**

**3.1. Module Descriptions**

1. **User Dashboard**  
   **Purpose** : The user gets a personalised dashboard which lists all the available lessons, marks/score of activities they've completed and a Q&A portal where they can ask a question.  
   **Rationale** : This module is created to ensure that every user's performance and progress is tracked individually.
2. **Content Creator Dashboard  
   Purpose** : The creator dashboard allows them to add different kinds of content together to prepare an engaging lesson/activity. There are different spaces for different formats of content like Text, Image Audio, Video, MCQ's etc. The interfaces of both user and creator are alike but the creator gets to upload and edit the content whereas the user can only access the content. The content creator is also responsible for replying to any questions asked by the user in the Q&A portal.  
   **Rationale** : This module is created to allow a creator to design a lesson/activity in as flexible a manner as possible.
3. **Weekly Lessons**  
   **Purpose** :
4. Listening/Reading/Speaking
   * an audio file which the user has to listen to and answer the questions based on it
5. Writing
   * There are different ways in which this lesson can be designed
     + a drag and drop option where the phrases and word need to be dragged and arranged in the correct order to form a meaningful sentence
     + a cross word puzzle and a grid game

**Rationale** : This module is created support different content formats.

1. **Assessment Module**  
   **Purpose** : Assessments and tests can be designed using a lot of different formats. The various formats supported in the initial version are :  
   - Multiple Choice Questions  
   - Crossword  
   - Drag and Drop  
   - Match the following  
   - Fill in the blanks

**Rationale** : This module is created to take allow design of engaging activities.

1. **Summarized Marks Download**  
   **Purpose** : The creator can download the summery of all the marks on individual students in an Excel or PDF format.

**Rationale** : This module makes it easier for the creator to keep a track of all the assessment results and publish them as and when needed.

**4. BASE PAPER and REFERENCES**

**4.1. References**

* https://www.researchgate.net/profile/Tsvetozar\_Georgiev2/publication/262367952\_M-learning-a\_new\_stage\_of\_e-learning/links/00b495151514d5274b000000.pdf
* http://www.acousticslab.org/dots\_sample/module4/Berge2002\_ActiveInteractiveReflectiveLearning.pdf
* http://itdl.org/Journal/Jan\_15/Jan15.pdf
* [E‐learning: emerging uses, empirical results and future directions - Welsh - 2003 - International Journal of Training and Development - Wiley Online Library](https://onlinelibrary.wiley.com/doi/epdf/10.1046/j.1360-3736.2003.00184.x)
* [E‐learning: engagement, enhancement and execution | Quality Assurance in Education | Vol 10, No 1](https://www.emeraldinsight.com/doi/abs/10.1108/09684880210416102)

**4.2. Base Paper**

* Active, Interactive and Reflective e-learning : Zane L. Berge(University of Maryland, Baltimore) [http://www.acousticslab.org/dots\_sample/module4/Berge2002\_ActiveInteractiveReflectiveLearning.pdf]