Advanced Replacement (AP) Music Theory Self-Study Program Through Integrated Online Technologies

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# Introduction

The trend for online and integrative Learning has become more prevalent in recent times due to technological advancements and changing social dynamics where students have become busier due to financial and personal constraints. One of the major strengths of online study portals is to integrate all the learning resources at one point that can help the High school students to promote self-study with better understanding and learning. To facilitate the high students opting for Advanced Placement (AP) Music Theory course, online integrated portal can be developed as the e-learning technology has evolved that provide the flexibility for students to work on their own schedules without having to attend a regular classroom. This approach provides extensive learnability and understandability of the students through virtual reality paradigm. However, often students find it challenging due to limited interactivity and lack of face-to-face conversations. In order to overcome this issue, graphic designing can be integrated for enhancing the virtual Reality Experience of the students. Interactive, integrative and reflective Graphic Designing can be used to develop a more interactive, engaging and immersive virtual reality paradigm that can enhance the learnability of the students.

## Purpose

Integrating Advanced Placement (AP) Music Theory Curriculum arrangement project online and combines all online resources/software/apps in one website/classroom for Maryland State public high school students who are going to take the Advanced Placement (AP) Music Theory course for free using Reflective and Interactive Graphic Design, and Virtual Reality approaches to promote student learning and better understandability.

## Aims and Objectives

The aims of this project are:

* There are only minimum sources offer online AP Music Theory aid for High School students.
* The idea is to integrate my AP Music curriculum design with the current online software and resources available in one website that allows home-school and self-improvement students to have a convenient way to search all music information through their own time/pace with tutorial help alongside.
* The website courses will be categorized into different levels for each suitable individual.

The objectives of this study will involve:

* Identifying various Virtual Reality Theories that can promote student interactiveness and learning
* Developing recommendations for engaging more distant education students.
* Enhancing their learnability and understandability of the course concepts.

# Problem Statement

Advanced Placement Music Theory is a course and examination offered in the United States by the College Board as part of the Advanced Placement Program to high school students who wish to earn credit for a college level music theory course. Some of the material covered in the course involves low sight reading, in-depth terminology, musical phrasing and composition, music history, chord structure and cadences, and other areas of music theory. This course is recommended for students with particularly strong abilities in music and college music majors. This also makes this course difficult for self-study students as there is no set syllabus and requires extensive skills as well. Therefore, in order to promote self-learning and self-study, it is recommended that an integrated and reflective online portal is designed for the High School students that can enhance learnability and understandability of the AP Music Theory High School students.

# Background

## Self-Study Through Online Portal

A choice to self-study involves a decision of instructive condition and types of learning. In the time of data society it is the Internet. It turns into an instrument ready to help individuals to expand their insight, gain new abilities in a brief span and regularly at a much lower cost. By using the Internet one can start collaboration with the best masters in a given field.

Instruments that empower such collaboration include: discussion gatherings, bunch ventures, phone message, ongoing talks, video meetings, and so forth. On account of the procedure of globalization, training does never again expect venturing out to scholarly focuses, frequently situated far from one's place of home, or even physical nearness in an address room, rather, it tends to be sought after from home. In the period of globalization, gathering learners in a uniquely dedicated spot loses significance, instruction of the 21stcentury is presently moving from a "real" to a "virtual" class (Kang & Goo, 2007).

The job of a PC and the Internet during the time spent self-study comprises in supplanting and advancing certain exercises performed by a member of the procedure. It comes down to: enlightening, preparing, controlling and sorting out capacities.

It can along these lines be noticed that these days, PC and data technology can bolster instruction in adaptable ways: they can be utilized as subjective methods, among others, in learning through discovery and critical thinking; training through experience because of their interactive limits, just as learning through training (Kang & Goo, 2007). Instructive PC projects may serve the accompanying capacities: passing on new teaching substance; refreshing the officially procured information; controlling the learning and aptitudes; animating interests in a specific field; personalization of learning; communication between a learner and a PC (Kang & Goo, 2007). The degree and the dimension at which those capacities are satisfied relies upon capabilities, the aptitude of basic leadership while choosing the best projects that coordinate the intellectual dimension of the learner at a specific phase of advancement from a wide scope of items, just as the expertise of viable utilization of a PC in self-study.

These days, a PC comprises a methods for improving capabilities and getting new ones, just as a device for finding and routine with regards to adaptable aptitudes.

### E-learning as an advanced type of distance instruction

The Internet opens another generationof distance instruction, introducing refined conveyance devices and making a paradigm move with significant ramifications on the design of distance training courses.

Distance training, likewise alluded interchangeably as distance learning, is certifiably not another wonder. It advanced from correspondence study, open universities, remotely coordinating, networks and interactive media conveyance to the present Web-based technologies. This advancement is described by new teaching approaches, including the alteration of instructional materials upheld by various conveyance media. With the appearance of the Internet, another age of distance training rose. Correlative to different models, Internet-encouraged guidance takes into account the execution of synchronous and offbeat interaction and opens another arrangement of learning opportunities for instruction. Increments in data transfer capacity technologies and worldwide access to interconnected networks empower the Internet and the World Wide Web to form into a suitable conveyance framework for distance instruction (Kang & Goo, 2007).

Digital instruction, distance instruction, teaching and learning through the Internet, online preparing and learning are the types of training that make great conditions for long lasting learning.

The most up to date strategy for procuring information using PCs and the Internet by e-learning includes studying in a virtual situation, mixed learning, joins such components as: data techniques, interaction, instructive assets, group and individual work, formal and casual training, just as help (Wilen-Duganti, 2009). The method for consolidating those components can vary. Learning may appear as visiting websites so as to acquire data. Those websites might be explicitly arranged as a component of an instructive or preparing program. While hunting down data on the Internet, as on account of a library, one needs to locate the essential materials. It is certain that abilities which are important while hunting down materials in a conventional manner or through the Internet share a great deal for all intents and purpose.

(Wilen-Duganti, 2009) indicate that online instruction is developing in the United States at a stunning rate and they likewise indicate that most students will probably be taken on an online course later on.

Likewise open training with a wide scope of e-learning administrations, arranged towards gathering the market needs has been broadly advanced. Universities are endeavoring to differentiate their courses and grow high quality teaching programs, which utilize sight and sound, that will fulfill scholastic, technical and expert needs of different gatherings of students.

### Successful e-learning aptitudes

The utilization of digital instruction requires certain extra practice in communicating with the utilization of short text messages utilized amid visits or through messages, therefore the principal capacity one needs when self-teaching through the Internet is proficient interpersonal communication (Wilen-Duganti, 2009). It is joined with the following urgent aptitude of data processing. The procured information needs to internalized and in this manner, checked by and by. What is vital is normality, just as ahead arranging of the learning procedure. To put it plainly, another aptitude appropriate, sound work association. Other wanted capacities incorporate the expertise of looking for data, choice, assessment and investigation of appropriateness of the data found. We currently need to make reference to the aptitude of check of the information. Another significant angle is building up a propensity for pioneering activities. The initial step is positively embraced the procedure of self-study, the following - compelling e-learning. The last is the utilization of information picked up by and by.

It is additionally simple to consummate the expertise of brisk response to changes as we learn through digital instruction. Adjustment to new conditions is an element that ends up helpful both at work and in some other circumstance (Wilen-Duganti, 2009). We ought to likewise not disregard self-control, which is essential for steady quest for objectives, as we, as duty and self-criticism.

### Integrated and Reflective Educational Online Portals

Instructive online portals contain programming that permits to make a domain that is vital to all exercises attempted as for distance learning. On account of the utilization of email and the discussion gathering component it is conceivable to rapidly respond to the inquiries and issues of learners. It is likewise conceivable to give a phone number on which - at determined occasions - a contact individual can give us technical or topic related help.

Instructive gateways utilize present day, sight and sound and interactive instructive apparatuses, give e-learning courses, which apply powerful instructive techniques, for example, explicit, yet alluring for clients, contextual investigations or basic leadership tests (Wilen-Duganti, 2009).

Likewise master gatherings have been made on which client questions are replied by authorities from those fields; talks are sorted out with specialists, amid which very individual using the gateway may pose inquiries and have an online discussion with a specialist; discussion discussions additionally assume a job of issue investigation gatherings - clients discuss issues in topical squares, responding to questions and looking for solutions to the issues; a particular type of preparing are basic leadership diversions, which enable Internet clients to envision anecdotal circumstances and jobs just as settle on choices identified with them, in the meantime watching the results.

Instructive entries as a rule utilize a collection of instructive materials, some portion of which are of an interactive nature. They contain a collection of recordings straightforwardly in regards to the studied field, introductions that utilize PowerPoint introduction slides, tests in regards to the exhibited issue, a synchronous talk, a discussion gathering, email and voice message, venture bunch work with the utilization of the equivalent instructive material.

### Advantages and disadvantages of distance learning

An e-learning framework is a Web-based communication stage that permits learners, without restrictions on spot and time, to accessdiverse learning instruments, for example, discussion loads up, appraisals, content vaults, and archive sharing frameworks (Zhang & Kenny, 2010).

E-learning makes learning increasingly available in light of the fact that, not exclusively would individuals be able to study when it is helpful for them, however they likewise approach instructing and support possibly nonstop. This implies it is conceivable to give an encounter progressively like a classroom, with specialists coaching learners found anyplace in the world (Zhang & Kenny, 2010).

E-learning is rapidly turning into a crucial piece of the learning and teaching process since it makes communication among learners and among learners and educators/teachers increasingly productive (Zhang & Kenny, 2010). It likewise enables associations to build the topographical reach of their preparation assets and supplement up close and personal preparing exercises.

Given that one of the principle jobs of e-learning is to consolidate and distribute work-applicable information, all things considered, e-learning use is decidedly identified with employment execution (Spector et al. 2008). Another advantage of e-learning contrasted with customary preparing is that e-learning can take into account diverse learning styles by giving various ways of learning.

Despite the fact that e-learning is being utilized all the more intensively lately and a few experts have shown an eagerness to explorenew approaches, numerous associations still hold misgivings about getting to be included with imaginative instructive apparatuses and have not yet acknowledged what can be accomplished with them (Spector et al. 2008).

E-learning as an instructive strategy has the two its supporters and adversaries. (Spector et al. 2008) that the supporters, underscoring the benefits of this strategy, regularly point out:

* extensive cost productivity - instructional courses educated in a conventional manner must cover compensation for an instructor, rental of an instructional hub, transport, settlement, board, and so forth.;
* time productivity - representatives don't cause any carelessness at work, as they study in the most helpful spot and time, just as they don't need to interrupt their ordinary obligations;
* simple outcomes assessment framework - students can without much of a stretch screen their learning progress through information confirming tests.
* boundless number of prepared individuals - there is no confinement with regards to the quantity of members learning online, as on account of instructional meetings educated by conventional strategies;
* constant improvement of the preparation program - each online course program can be adjusted through the Internet to address the issues of individual members, prerequisites of the market and changes in law.
* current teaching strategy - members can improve their insight using the most up to date devices, a student can whenever come back to the data gave in the online preparing and confirm their insight;
* e-learning is an ideal strategy for teaching the disabled - frequently the only access to information for people with disabilities.

To the extent disadvantages identified with the utilization of e-learning solutions during the time spent instruction are concerned, we can distinguish the accompanying:

* restricted direct interactions - communication for the most part dependent on a text read from a PC screen, nonconcurrent and synchronous communication,
* technical issues - reliance on the nature of gear, PC and Internet speed just as PC aptitudes,
* no calculated help (managerial and technical) - no probability to get to the wellsprings of instructive materials,
* a student must be self-disciplined. The previously mentioned negative perspectives ought not be a deterrent in choosing about the way of self-study and self-improvement. Online instruction will clearly add to a progressively successful and productive utilization of instructive materials accessible on the Internet, as more current and more up to date instructive gateways jump up offering online learning opportunities.

In their latest reports on the condition of online instruction in the United States, (Dahl, 2010) found that online courses would almost certainly become a significant piece of the collection for most college students sooner rather than later. Besides, this report recommends that the regular observation that online courses can't be on a par with courses which utilize eye to eye guidance is beginning to disintegrate.

## Significance of Online Course Portal

Education has proceeded onward from traditional books to the utilization of intuitive advances to help grant learning and comprehension. E-learning innovation can't tackle all issues that exist in conventional education in spite of the fact that it enhanced customary instructing systems. E-learning stage in the mix with innovations, for example, data, sight, and sound adjust the customary learning style and learning environment. Educators can convey an address at whatever time and wherever. E-learning changes the connection amongst educators and students in conventional education and gives a stage to students and instructors to impart. Students can do helpful study through the stage (Dickey 440). The significant worry of educators is the manner by which to upgrade the result of education. Compelling education media used to help to instruct have been continually looked for by the scientists in educational innovation. Virtual Reality (VR) has been distinguished as one of them. There are a few routes in which VR innovation is relied upon to help to learn.

It permits students to envision digest ideas, to watch occasions at the global level, and to visit environments and interface with capabilities that remove time, geographic and financial constraints for easy accessibility. Therefore, such activities that are upheld by this innovation advance current educational believing that students are better ready to excel and sum up new information when they are effectively required in developing that learning in an immersive environment (Dede 2014).

Therefore, Virtual Reality has been characterized as an extremely intelligent, immersive and intelligence environment with integrated multimedia experience that gives an immersion impact to the clients. It empowers people to straightforwardly cooperate with technologically produced environments that recreate the physical world. Therefore, the VR paradigm is currently utilized as a guide of instructing and practice in an extensive variety of fields, for example, building, solution, outline, design and development, education and preparing because it can give significant change and can be powerful (Swan 15).

Furthermore, the VR paradigm can be classified into two primary sorts given the level of connection and immersive environment. Moreover, the Immersive VR paradigm or environments are exhibited on different, room-measure screens, etc. In non-immersive VR, technological recreation is spoken to on a conventional VR Paradigms and cooperation with the virtual environment is done utilizing console, mouse, joystick, or touch screen (Bates 2016).

## VR-Based Education

Some unique ideas are still exceptionally troublesome for students to appreciate because there are no substances to show to them. VR innovation just compensates for the deficiencies of e-learning. It can recreate trial types of gear and offer a virtual trial environment for students. What's more, students can connect with the virtual environment through info gadgets, for example, mouse, console. Educators can make up virtual questions or conceptual landscape by VR innovation to offer an invigorating and fascinating learning path for students (Dickey 440). Three ways to deal with education can be alluded: full-time education, low maintenance education ( the part at school, part virtual or at a separation) and separation education (virtual).

Up close and personal or full-time education is the ordinary sort of education and the most generally utilized approach in typical courses at any level, requiring instructors and students to be as one in the classroom. The second approach consolidates learning in the classroom and at a separation utilizing present day innovation. Remove education might need up close and personal minutes as instructors and students are physically isolated in space or in time while having the capacity to associate through correspondence advances, i.e. virtually (Monahan et al. 1340).

The virtual reality environments which are composed particularly for education commonly fall into three classifications. The primary incorporates arranged content based virtual environments, which are highly intelligent yet not immersive. The second includes desktop virtual reality VR Paradigms, where intuitiveness is restricted shifts yet as indicated by the control given by the program, and immersion additionally differs, however, is not effectively given. The third classification incorporates the immersive VR environments, where immersion is high, yet intelligence might be constrained, contingent upon the multifaceted nature of the virtual world.

## Simulated Learning

Simulated Learning Paradigms are intelligent and technologically developed learning environments that mirror a real-life circumstances. The use of simulations as a type of virtual reality also permit learners to test their speculations of the impacts of information factors on the expected results (Dickey 440). Furthermore, the reproductive simulations can give financially savvy routine of procedures utilizing virtual contraption that in real life could be cost restrictive. For instance, frog analyzation – a simulated learning program (Dickey 440) is an ordinarily utilized procedure to show life structures in high school science classes. Furthermore, Vfrog™ can be described as a mainstream recreation that permits students to lead frog simulation various circumstances utilizing virtual contraption. Directing dismemberment procedures physically in a research center may force budgetary weight, as well as be conflicting with students' close to home convictions about leading creature analyzations. Recreations are likewise invaluable because they enable the learners to enhance their abilities that generally could be perilous to rehearse in the real life circumstance, in a protected, virtual and simulated environment.

Furthermore, another example of simulated learning is Mr. Vetro™ for medical graduates. It is a regularly utilized reproduction of a few restorative situations that gives students the chance to hone their abilities before honing it on real life patients. Along these lines, the medical students can bypass and overcome the involved risks and dangers of applying certain procedures specifically on the patient without adequate experience, practice and knowledge, which may imperil the life of patients. Moreover, the analysts have relegated diversions for learning as an uncommon class of reproduction (Dede 2014). Inquire about proposes that keeping in mind the end goal to advance learning, recreations must be configuration to furnish players with a feeling of self-rule, personality, and intelligence (Dede 2014).

All together for amusement to incite learners' enduring inspiration and delayed interactiveness with the learning materials (Dede 2014), the plan of the diversion must give learners ability to strategize their decisions, choices, test speculations, and take care of the issue (Swan 15). Keeping in mind the end goal to give these encounters, amusement must incorporate components, for example, objectives, accomplishment levels, and rewards frameworks. The amusement planners likewise consider story lines and case studies, that can lead the player to the diverse and specific cases through simulated paradigms. The amusements may likewise comprise of energized operators that advise the players about the setting of the diversion, standards of the diversion and also gives intuitive prompts and input. Notwithstanding, diversion fashioners immovably expresses that story plots must be implanted inside the learning setting of the amusement rather than something that is overlaid and separated from the learning objectives.

Furthermore, the flow theory by Csikszentmihalyi's (2000) gives structure to translating the viability of diversions to connect with players and rouse them to support the play. If the diversion is excessively testing, the player will be baffled, and if it's excessively straightforward, the player will lose intrigue. Moreover, the players are probably going to end up separated and quit the diversion play. Virtual paradigms may contain at least one of the accompanying components: the figment of being in a simulated paradigm, capacity to fabricate and interface with the 3D objects, advanced portrayal of learners in the type of symbol, and capacity to speak with different learners in the virtual reality paradigm.

On the contrary, the organized environment of VR Paradigms and amusements, virtual paradigms can be open-sourced environments in which clients plan and make their items. The fast increment in the innovative refinement, assorted qualities, and inescapability of virtual and simulated learning environments, alongside the multiplication of research on their adequacy in educational settings, requires visiting precise expository combinations of their viability. Few meta-examinations or different surveys have been led to date.

# Review of Literature

The study conducted by (Bates 2016) led meta-examinations in which they broke down the impacts of intelligent VR-based diversions and reproductions and discovered factually noteworthy positive effects on learning results. Furthermore, the research also focused on the aspects such as the balance impacts of sexual orientation, learner control, age, realism, and learner coordinated effort on learning results. Furthermore, the students performed better when they were responsible for their route through the virtual learning environment contrasted with when the educator controlled the learning paradigm. Furthermore, the students in traditional classroom setting still beat the students in the virtual learning environment when the arrangement of learning exercises was controlled by the VR programs.

Furthermore, (Monahan et al. 1340) concentrated on the impacts of diversions and reproductions in improving business related learning and abilities, analyzing factors, for example, stimulation esteem, sort of control gathering treatment, get to the level, the method of direction, and methodological quality. As per the result of this study, researchers announced the highest pick up in the measure of self-adequacy when contrasted with procedural information, decisive learning, and maintenance.

The virtual environmental qualities, for example, the dynamic introduction of materials, un-constrained get to the level to the learning materials, and the introduction of the materials in a supplemental organization was more powerful. Moreover, an orderly writing audit on the utilization of virtual paradigms with regards to higher education in which majority of the studies included were unmistakable in nature (Monahan et al. 1340). Their audit analyzed virtual paradigms in three zones: employments of virtual paradigms by students and educators, sorts of research strategies connected to study the impacts of VR Paradigms, and sorts of points inquired about in 3-D virtual paradigms.

Moreover, the aftereffects of this survey showed that VR Paradigms are utilized as correspondence spaces, VR Paradigms, and experiential spaces. A few various types of points are explored in 3-D virtual paradigms into members' full of feeling space, learning results, and social association. Our study adds to the field of desktop-based virtual reality advances for instructional use in a few ways. In the first place, the meta-examination concentrated on surveying the adequacy of recreations (Warburton 415). Also, (Warburton 415) caved in both VR Paradigms and diversions into a solitary class and called it "recreation amusements." This may represent a few concerns since reproductions and diversions have distinctive plan elements, and it is critical to study conceivable contrasts in their impacts on the learning results.

Dissimilar to, (Warburton 415), (Pan et al. 22) distinguished recreations and amusements into independent classifications. Like Vogel et al., we additionally separated amongst reproductions and recreations. Also, we extended the extent of this meta-investigation to incorporate virtual paradigms, which is a standout amongst the most quickly rising and mainstream types of VR Paradigms innovation. Moreover, (Warburton 415) concentrated on integrating the impacts of diversions and recreations in the range of improving business related information and aptitudes. Then again, (Pan et al. 22) included studies identified with both work put and educational settings; be that as it may, their study did not break down the impacts of each setting independently. It is important to understand that both business related preparing and education preparing vary and ought to be studied freely. In this way, our meta-expository examination concentrated on instructional viability in higher educational paradigm.

Furthermore, the researchers broke down the directing impacts of factors integral to the field of instructional outline and are examined in the accompanying area (Hew & Cheung 35). These researches outline elements are not broke down in a portion of the past meta-examination, for example, input, students' level of cooperation, educator get to, and curiosity impact. What's more, we additionally analyzed the connection between studies look into outline quality and revealed impact sizes. At last, the latest studies incorporated into the past meta-investigations were distributed in 2009 (Dickey 440), and one of the meta-examinations is over ten years old. The survey included studies until 2011. This won't just give the knowledge about the present writing on desktop-based virtual reality innovations, however, will likewise fill in as a similar investigation for analyzing the quick changes in the energy of VR Paradigms innovation and the improvement of learning adequacy managed by the innovation control (Dede 2014).

## Using Reflective Graphic Design to Develop Interactive Online Course

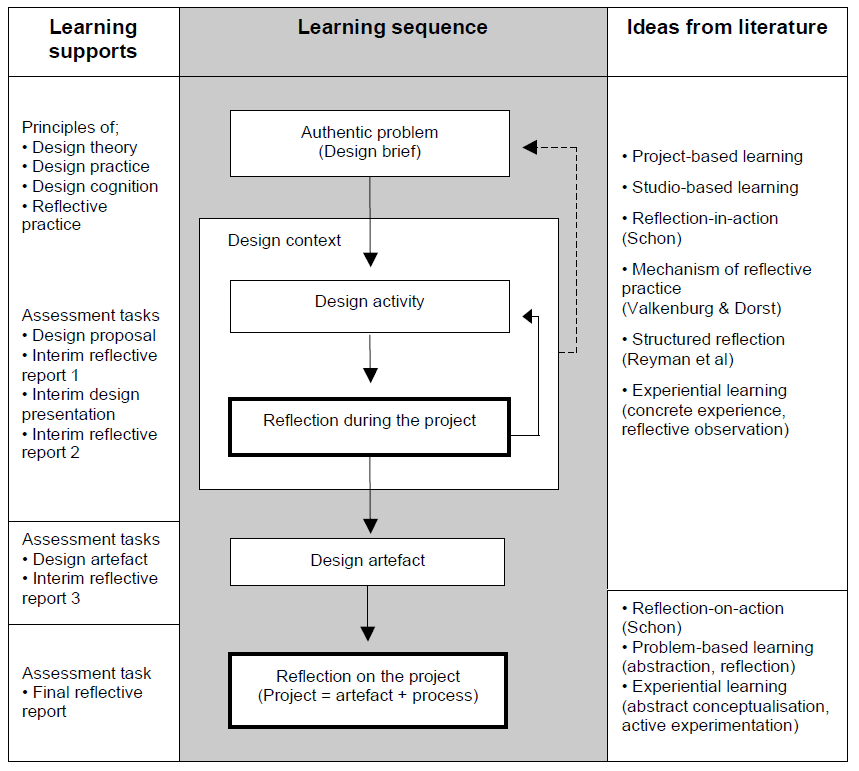
The trend for Online and interactive portal for self-study has become more prevalent in recent times due to technological advancements and changing social dynamics where students have become busier due to financial and personal constraints. To facilitate such students, Online and interactive portal for self-study has evolved that provide the flexibility for students to work on their schedules without having to attend a regular classroom. However, Online and interactive portal for self-study also have several issues and challenges that need to be addressed. One such challenge is regarding the learnability and understandability of the students through virtual reality paradigm. Often students find it challenging due to limited interactivity and lack of face-to-face conversations. To overcome this issue, graphic designing can be integrated for enhancing the Virtual Reality Experience of the students. Graphic Designing can be used to develop a more interactive, engaging and immersive virtual reality paradigm that can enhance the learnability of the students through an efficient reflective

Graphic Designing can be used to enhance the interactivity and immersive nature of the Virtual Reality Platform for Online and interactive portal for self-study Students to increase their learnability and promote better understanding and engagement with the course objectives.

## Recommended Solutions for Better Virtual Reality Experience for Students

The graphic design pedagogy is an emerging area of interest that emphasizes on developing the graphic design based strategies for enhancing the learning experience of the students. Two fo the main graphic design strategies used for pedagogical purposes are project based learning, and studio-based learning approaches (Ellmers 2006). Therefore, it can be stated that either of these or a combination of these strategies can be used for the implementation of graphic design tertiary programs for pedagogy.

The project based learning can be described as the comprehensive strategy for the classroom learning and teach for the effective engagement of the students and encourage them to investigate the problem-solving strategies in such a way that the students are placed in a contextually designed, realistic and practical-life based immersive experiences (van Kampen et al. 2015).



## Pedagogy Frameworks

Furthermore, this approach is collaborative and investigative in nature. The project-based approach is also modular and based on multiple levels to develop a progressive approach by the students. Following are the basic steps involved in this project (van Kampen et al. 2015):

1. Driving, developing and authenticating the problem
2. Collaborative design of the activity
3. Formative assessment
4. Revision and review
5. Project presentation and artefact development.

The second reflective designing based pedagogical approach is studio-based learning. This approach has been inspired and driven by the design principles of architecture and infrastructure (Muller & Flohr 105). In this approach, some of the important components will include the setting of the design problem, delivery of the specially designed periodic lessons, critique and assessment of the student performance, and analytical development of the problem (Muller & Flohr 105). Furthermore, the key component of this approach is to establish a relationship between the teacher and the student (Appiah 2014).

Four primary components of this approach include (Appiah 2014):

1. Formulating and designing the problem
2. Exploration of the problem solution through action based activity
3. Re-evaluation of the problem
4. The teacher or the jury, finally, evaluates the student activity and performance in the scenario.

Researches and observations have shown that often students find it difficult to extract knowledge and information from projects or subjects only. Instead, they are better able to learn and accept the learning objectives through exposure, immersive experiences and contextual design process. In such cases, the design process can be considered an important aspect for the professional graphic designers for transferring the expertise, information, knowledge and learning objectives.

## Development of a Reflective Graphical Design for Pedagogical Objectives

The reflective framework that can be applied for pedagogy through graphic design objectives is based on the establishment principles of studio and venture based learning, incorporates components of reflective practitioner framework, and includes the abstraction and reflection ventures of problem-based learning.

The students are given a bona fide design problem, which is then framed through the foundation of the design setting. Within this frame, the students build up a solution in the type of a design artefact through a cyclic procedure of action-based activity and a reflection inaction handle, before presenting the final design artefact for evaluation. During this procedure, the students get parts of design hypothesis and practice pertinent to the subject targets and the postured design problem. Once the design extends has been exhibited the students start the final phases of abstraction and reflection, which is verbalized through a composed evaluation undertaking.

Appraisal has been recognized as an integral part of learning that spurs and coordinates student learning. The inclusion of a formalized appraisal assignment in the reflective framework spurs and centers the student to connect with the final phase of reflection and provides them with a stage to verbalize their understanding. 'Appraisal that elucidates procedure, how students work, can possibly divert the learner toward reflection and understanding.'

Curriculum and scholarly works can be a valuable learning system to urge students to actively participate in the reflection procedure (Muller & Flohr 105) and archive confirmation of learning. The diary can give an important vehicle to the improvement of reflective expert practice (Alhairi 430) and build up a method for the student to separation themselves from their experience (Alhairi 430).

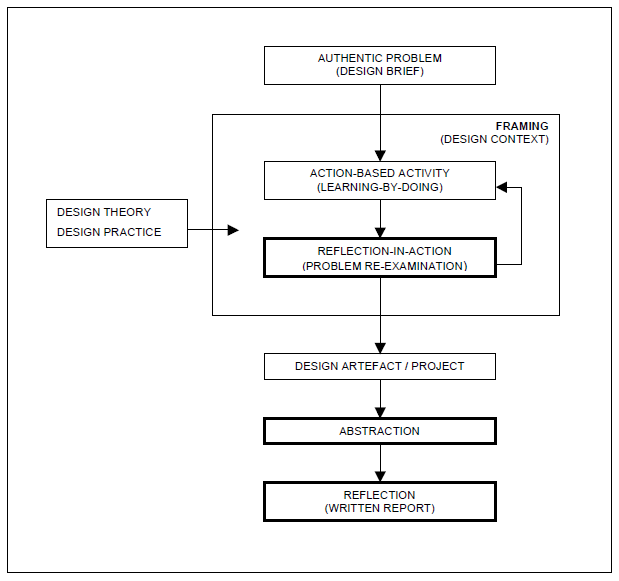


Figure: Cyclic Process of Reflective Framework Design

The significance of methods, for example, diary keeping and visual note taking in the design procedure to 'empower internal discourse'. The diary procedure has been attributed as a way to prove a profound way to deal with learning and as a more dependable methods for establishing student understanding than relying only on the final design artifact.

## Case Studies

In the age of globalization and international relationships, it is important to remove demographical and geographical barriers from the academic systems. This requirement is being fulfilled by the extensive implementation plans of online and interactive portal for self-study. Renowned universities and colleges of the world are joining hands to support globalized online and interactive portal for self-study with better opportunities of interactions and collaborative e-learning. Recently, we have been working on a similar collaborative platform that supports the online and interactive portal for self-study. It is known as "Second Life." The major purpose and objective of the developers of the *Second Life* are to provide a virtual world and platform that is efficient enough to support interactive and collaborative online and interactive portal for self-study experiences for the international students. Apparently, this virtual online and interactive portal for self-study environment has been very attractive and effective for the students like me who are bound by geographical constraints from obtaining the quality education with collaborative discussions.

Using the “Second Life” virtual world was an enormous and very constructive experience. Based on my learning over the virtual platform, researchers and educators can clearly state that the online and interactive portal for self-study over the virtual environments enhances the real-life learning abilities with extensive learning opportunities and benefits. Having a wide spectrum of interactive options in support to the technological efficiency, the students can communicate, respond and interact more engagingly.

The *Second Life* has to ability to allow the students to synchronize their learning efforts with other students and choose to work either as a team or individually. Furthermore, *Second Life* has an always-available learning space or center that allows the geographically dispersed students to meet and hold discussions with a flexible schedule and routine. This makes student – student interaction more effective. I have personally achieved a lot through this form of discussion. The reason was that I could log on to the learning center with my ease of time without putting a burden on my personal routines and schedule. In other words, it allows stress – free learning platform.

Making the most out of available technological interactive solutions, *Second Life* has made the learning experience more exciting and effective. For the sake of enhanced real life experiences, *Second Life* implements the features of teleconference calling and the interactive web presentation tools. One of the most interesting features of the virtual portal is its ability to create the simulated environment for the field trips. This adds to the efficiency of the online and interactive portal for self-study.

In my opinion, *Second Life* is one of the most successful distant virtual learning environment because of the ways it has produced a highly interactive virtual environment that is beneficial for the academic, personal and professional development of the students. It offers simulated training sessions with the key features like personalization and avatars that make the training fun and effective at the same time. Despite the geographic, demographic or financial constraints, the students can learn by making their "presence" felt at the very location that is artificially simulated by extracting the real life objectives and features of the environment.

Personally, experience the virtualized and interactive world of the *Second Life;* I have succeeded in learning beyond the traditional classroom objectives. I have succeeded in learning not only the course contents and syllabus but also how to interact at the global level and how to think critically to think outside the box. By providing the interactive features like role laying and simulations, *Second Life* has succeeded in allowing interactive presentations, discussions, learning through recreating the scenarios, etc. Conclusively, it can be said that the *Second Life* has succeeded to quiet an extent to fulfill the requirements of the online and interactive portal for self-study.

Instructing and Learning Opportunities in Second Life The utilization of Second Life in graduate education and in instructing and learning environments when all is said in done are not restricted to separation learning. As a free asset that in the past would have been cost restrictive, Second Life speaks to a open get to, immersive virtual 3D learning environment that has numerous potential uses in educating and learning environments. Given the consequences of our study and survey of the writing, here is a portion of the significant instructing and learning openings Second Life speaks to: Placing an Avatar with a Name - before, and even today, a run of the mill synchronous online communication in separation education includes the content based visit. Clients are characterized by their client name and impart by writing content based messages. Second Life, unexpectedly likewise utilizes content based visit as the essential technique for correspondence. Changing the correspondence environment from a level, content based one-dimensional interface to a rich, multi-shading, 3D environment that permits clients to speak to themselves with virtual symbols or portrayals of themselves. As student disengagement is one of the real issues related to separation education, the capacity to "place a symbol with a name" and include the parts of non-verbal portrayals of identity and feeling, has huge ramifications for social cooperation and correspondence in online environments. While sharing the real advantage of on the web, synchronous correspondence, which is not to need to meet up close and personal at a particular physical area, Second Life includes numerous extra layers through virtual portrayals of physical qualities and correspondence to this online connection. Synchronous Virtual Information Seeking - Unlike exploring a Web website, in Second Life you have the chance to associate with both static data and synchronously with different clients.

The idea of including a synchronous, three-dimensional viewpoint to online data looking for is one of the parts of Second Life that has caught the consideration of the corporate world. Similar advantages apply to educating and learning environments where students can both get to computerized content in Second Life while in the meantime captivating in a talk with a student or educator. Likewise, different clients through their virtual symbols fill in as extra assets that generally would not accessible. For instance, at Cybrary Island, data science structures from over the world are housed together running from the US to Europe to Asia. Collaboration among teachers and students are visiting and, taking part in talks around common themes of intrigue that is worldwide in nature, has numerous potential outcomes.

A Virtual World Allows for Virtual Experiences and Resources - In Second Life you can perform undertakings, make articles and environments, and communicate with individuals and items that you can't do in real life. For instance, you can fly, transport, and for the most part control and modify your symbol in boundless ways. Outside of the social outcomes of having the capacity to make a computerized self, making virtual learning environments or connecting with existing substance rich ones is the place Second Life exceeds expectations. Albeit like most online guideline, arranging and planning is important to discover applicable assets and to guarantee the trustworthiness and adequacy of direction, Second Life can be utilized as virtual field trips so students can discover pertinent assets as well as possibly have the chance to see and connect with 3D advanced data and additionally different clients as data assets.

Innovation as a Nexus Point - The Internet and the Web interface individuals and data together. Generally, this is done through advanced data for the most part as content, illustrations, video, and archive/file trades. In separation education, TV/video conferencing, Web cams and Web throws, strung talk sheets, and synchronous visit is the prevail mediums in which joint effort is accomplished in one-to-numerous educator to-student educational environments.

Web conferencing programming, which incorporates Web video, file sharing, and synchronous talk is highly attractive in the conveyance of separation education yet is to a great degree exorbitant and typically includes devoted interior assets and support by the separation program. Second Life offers a potential nexus point in which separate projects can use this virtual world at practically no cost for its educators and students. Social Association and the joint effort from multiple points of view are the most straightforward to accomplish in Second Life and in the meantime meets a basic requirement for separation students.

## Apple’s Instructional Innovation

(Clark et al. 2017) have contended that a standout amongst the most basic commitment that can be drawn from the utilization of technology in the learning of a learner is that it influences the mentality of a learner just as their instructors towards the learning and bestowing of information separately. There are a few studies that have recognized that when technology is made piece of a learner's life the specialists improves significantly and the rate of dropouts is declined (Clark et al. 2017).

A study led and an assessment of the Apple Classrooms of Tomorrow in 1994 out of an undertaking to asses the effect of interactive technologies in the learning just as teaching process in five schools that were situated in different pieces of the country (for instance Ohio, Minnesota, California, and Tennessee). The purposes for E-LEARNING were to underscore the instructors of the significance of PCs in the learning procedure (supporting learner activity), inspire instructors and learners to participate in long haul ventures, permit the two gatherings of the learning procedure get to wide scope of learning materials and empower instructional advancement just as helpful learning (Clark et al. 2017).

This study occurred for a long time whereby correlations were made; the examinations comprised of: E-LEARNING learners' accomplishments just as advancement over some time, the essential learning abilities of E-LEARNING learners' presentation in the broadly detailed standards, and instructors teaching practices of E-LEARNING instructors.

The experience from E-LEARNING appeared to prompt some new learning background that required a higher dimension of critical thinking or thinking. It was likewise recognized that E-LEARNING positively affected the disposition of the learners and was additionally ready to change the instructors teaching works on, empowering the learning procedure to be increasingly helpful whereby learners learning was a greater amount of gathering work and less of instructors addressing in class.

Apple Inc. (Clark et al. 2017) has noticed that when an examination was done between E-LEARNING learners to their non-E-LEARNING colleagues in a similar high schools, the rate of non-attendance among the E-LEARNING learners was about half when contrasted with the remainder of the school. The E-LEARNING program keep running for a long time without a single dropout; this was in the midst of the way that the whole learner body had confronted a 30% dropout rate in the standard program. Apple has additionally contended that more learners more often than not experience the total high school instruction and join colleges on the off chance that they are presented to technological learning in their high school learning. Its worth noticing that not exactly 50% of the E-LEARNING learners went to the program with the scarcest interest of assisting their studies to college levels. In the schools that he studies occurred the general ordinary learners who continued to college after high school was under 15%. Then again a hundred percent of E-LEARNING learners graduated in their high school studies whereby over 90% of them joined colleges for further studies. This is an unmistakable indication that work of technology in the learning of learners assumes a significant job in their inspiration (Clark et al. 2017).

There are a few effects that are gotten from the application of technology in the learning of learners: among the numerous effects are:

### Improved Scores on Standardized Tests

An improvement in scores on state sanctioned tests: A longitudinal research aftereffect of across the nation usage of technology including substantial scale integration of healthy educational programs in West Virginia and Idaho has plainly demonstrated comparing support in the scores of the test from over every one of the disciplines and subjects. The report has pointed out that in task investigate learners encountered a lift in science state administered tests (Vuorela & Nummenmaa, 2004).

### Increased Ability to Manage Learning

(Vuorela & Nummenmaa, 2004) likewise recognized that the learner's capacity to oversee learning is expanded with work of technology in the learning of a learner. There is a move of the inclining condition that is achieved by the utilization of the technology in the learners' learning; from being instructors focused to learner focused. Learners are empowered to characterize their own inclining goals. This urges the learners to be progressively occupied with their procedure of training. The activity additionally supplicates an exceptionally significant job of making learners to take the possession and duty of their instruction (Vuorela & Nummenmaa, 2004). The technology offers learners with a more extensive assortment of assessment instruments that will empower them to do self assessment all the more as often as possible to measure whether they are gaining any ground regarding information increase. By this they are bunch to screen their advancement without essentially sitting tight for the finish of term tests from their instructor to know their advancement.

Another finding was that the work of technology in the learning procedure builds capacity to advance accomplishment for the learners with uncommon necessities. They had recognized that there are a few research studies that had been led offering proof that the utilization of instructive technology gives significant advantage to scholarly accomplishment of the unique needs learners. The writers of this report drew from standardized exams in which member learners shared in an integrated technology prosperous educational modules. The outcomes exhibited the effect of the technology since the disabled learners picked up a normal of 89 points in the math and verbal tests. They likewise distinguished that disabled learners who utilized discourse acknowledgment programming in article composition had a higher exhibition than their individual disabled learners with no help, they performed approximately we as the ordinary non-disabled learners (Vuorela & Nummenmaa, 2004).

## Online and interactive portal for self-study and Virtual Reality for Interactiveness

Even though the e-learning or online and interactive portal for self-study is still a debatable technological development, it has become more prevalent and necessary. One of the key reason for this necessity is to enhance the accessibility to quality education by overcoming the geographic and time constraints. Secondly, online and interactive portal for self-study allows more flexible timings and schedules to accommodate higher studies in a relatively busier schedule. Giving access to educational projects has been claimed as a fundamental purpose of the advancement of improved interactive learning environments. Therefore, "Distance education has a key part in reacting to the dynamic, changing educational needs of society, in connection with the making of a knowledge-based society" (Zuhairi, Wahyono & Suratinah 95). Moreover, the NCES, 2001 overviewed organizations of advanced education and very nearly 70 percent of foundations studied demonstrated that expanding student access was a critical objective of their distance education programs (van Kampen et al. 2015).

This is for making courses accessible at advantageous areas, reducing time constraints, and making academics more accessible for a variety of students. Availability included populaces with disabilities (Foley 20); students in rustic areas (Hiemstra & Poley 145); students in racially, socially or socially abused nations (Makoe 362); and students in creating nations (Zuhairi, Wahyono & Suratinah 95). Given this, the examination venture was produced to research the utilization of virtual environments on student fulfillment and the adequacy obviously conveyance.

For example, AVR or Agent-Based Virtual Reality is a online and interactive portal for self-study paradigm that has been created by one of the universities (Dickey 440). The purpose of this project was to integrate the interactive classes directed in the virtual reality environment for student use in holding and checking on course content. Moreover, the commencement of this examination study is to decide the intensity of engagement and social interactivity through this AVR project. Furthermore, the critical analysis of this project also speculates that the AVR system most influences student were realizing when it altogether integrates the innovation to encourage interaction and engagement, subsequently expanding the adequacy of learning for course members.

# Recommendation - Online Curriculum Design: Integrated Components Recommended for the Online Subject Portal

There is no specific, fixed or particular set of curriculum, contents, texts or syllabus for the AP music theory subject. This is what makes it difficult to be a subject of self-study approach. In order to overcome this difficulty, it is recommended that the high quality e-learning sources, texts, contents, components, etc. will all be integrated into a single online portal that will make it convenient for the students to take the AP Music Theory subject and excel it comprehensively.

The subject review data for MT posted on the Webpage of AP website page incorporates a rundown of high school-level course contents that could be utilized for teaching the AP-MT subject. The Instructors' Resources area of the Webpage of AP website page incorporates surveys for a portion of these course contents. Some the most every now and again received course contents in high school-level MT classes incorporated into the rundown on the Webpage of AP page are (Kostka et al. 1984), (Benward, 2014), (Aldwell & Cadwallader, 2018), and (Rogers wt al. 2014).

(Kostka et al. 1984) is a complete high school-level MT course content proposed to cover the annual syllabus of the customary undergrad MT grouping in a edition. It is very much organized, with individual points obviously depicted, and it incorporates various musical models and activities inside every part. The AP-MT subject should utilize just the principal half of this content. A portion of the curriculum content, particularly in the sections that audit ideas related with music basics, might challenge for students with constrained musical experience (Ali, 2003). There is a related exercise that incorporates extra activities and learning activities.

(Benward, 2014) is an extensive high school-level MT course content proposed to cover the annual syllabus of the conventional undergrad MT arrangement in two editions. The AP-MT subject should utilize just the principal edition. It is organized in a dynamic framework of increasingly complex theoretical themes. The text incorporates a lot of "enhancement curriculum content," including chronicled dissubjects of MT ideas. Starting students ought to be mindful so as to separate between the "enhancement curriculum content" and the substance that is legitimately applicable to the AP-MT Assessment. Moreover, this course content to be altogether less testing than the (Kostka et al. 1984) content, fundamentally in light of the fact that most of activities and learning activities appear to be less hard for generally students. A portion of the instructive methodologies included, nonetheless, for assessmentple, the accentuation on voice-driving framework or the presentation of part-writing techniques by teaching two-section species contrast, are conceivably confusing for unpracticed AP instructors, who may not completely comprehend the theoretical associations between these ideas and the essential substance of the AP-MT Assessment (Clarke, 2002). There is a related exercise that incorporates extra activities and learning activities.

(Aldwell & Cadwallader, 2018) is a far reaching high school-level MT course content planned to cover the annual syllabus of the conventional undergrad MT succession in a edition. The AP-MT subject should utilize just the principal half of the content. It is masterminded in a dynamic framework of increasingly complex theoretical subjects. I think about the dimension of multifaceted nature of this course content, just as its progressed academic methodologies, to be impressively more testing than the (Kostka et al. 1984). Concordance and Voice Leading will probably present noteworthy troubles for most AP instructors and students, with the conceivable exemption of a couple of very propelled classes with experienced MT students. As the title of the course content recommends, there is an accentuation on the idea of voice-driving framework, which is unmistakably planned to set up the student for the study investigative standards (Clarke, 2002). Albeit helpful and significant for any student of MT, the ideas relating straightforwardly to Schenkerian investigation are past the extent of the AP-MT Assessment. Students ought to likewise know that the course content uses documentation frameworks that contrast in certain perspectives from the notational shows found in the AP-MT Assessment. Maybe the most huge issue identified with documentation frameworks is the nonattendance of case affectability in Roman numeral investigation inside the (Aldwell & Cadwallader, 2018). There is a related exercise that incorporates extra activities and learning activities.

(Rogers wt al. 2014) is a complete high school-level prima vista course content planned to serve the requirements of the conventional undergrad MT grouping in a edition. The AP-MT subject should utilize just the main portion of the total text. This composition is very much organized, with individual points plainly portrayed in every section; it incorporates various prima vista models and activities. Notwithstanding prima vista curriculum contents, there is broad substance identified with two-section, three-section, and four-section group singing just as substance identified with teaching ad lib and content identified with learning complex musical documentation.

Notwithstanding the course contents that instructors may receive for their classes, profitable assets can be found in advantageous curriculum contents distributed by the High school Board, for assessmentple, the AP-MT Subject Description and the AP-MT Instructor's Guide.12 The Subject Description production offers an exhaustive clarification of the AP-MT Assessment, including a point by point portrayal of the AP program and systems. It likewise incorporates nitty gritty instances of the test substance and test questions. The Instructor's Guide furnishes curriculum content proposed to help students with the way toward creating and actualizing an AP-MT subject, including broad dialog of explicit teaching systems and test subject schedules (Delahoussaye & Zemke, 2001).

AP-MT students can likewise incorporate extra e-learning curriculum contents that are essentially conveyed through computerized media or the Web-based portal (Dringus, 2000). These supplemental computerized curriculum contents may furnish students with the adaptability to study or to rehearse alone individual timetables (Dringus, 2000).

Industrially accessible programming bundles that are intended to be utilized by students freely might be incorporated into the educational modules of an AP-MT subject; in any case, the student of the class must cautiously get ready for the nonattendance of consistent reconciliation between the e-learning techniques and strategies for the essential subject work and the teaching procedures and phrasing utilized by the autonomous programming bundle (Dringus, 2000). Students must likewise consider the rules and strategies of each school area that identify with the official reception of online course contents. Also, the work created by the student in the autonomous programming bundle will likely not be frameworkd or proposed to be assessed by the student yet rather will be founded on an inner self-evaluated framework that may strife with the plan of the online MT class concerning both technical wording and the in general e-learning framework of the subject.

Probably the most generally circulated business MT e-learning bundles incorporate Alfred's Essentials of MT, and Auralia (DuCharme-Hansen & Dupin-Bryant, 2005). An e-learning programming stage that has been explicitly intended to work adequately regarding a high school or university MT educational programs is Picardy, an electronic membership administration, fundamentally expected for guidance in musicianship and aural abilities, that conveys an adjustable learning stage with student advance data for the student and an easy to use interface for the students (Dringus, 2000).

A course e-content that is expected explicitly for the utilization of high school and university MT classes is (Hubbard & Lale, 2016). This electronic course content incorporates broad utilization of hypertext e-learning connections, quality accounts of precedents performed by expert musicians, and a far reaching collection of exercises that are perfect with a totally online music essentials or first-semester MT class (DuCharme-Hansen & Dupin-Bryant, 2005). Another high school-level MT electronic course content is MFun, created (DuCharme-Hansen & Dupin-Bryant, 2005). This e-text is an intuitive course content that incorporates drills, tests, input, vivified precedents, and sound accounts. MFun additionally enables the student to redo different parts of the substance.

The article by John Kuzmich' titled as "Upgraded AP-MT Instruction" portrays various inventive and imaginative employments of e-learning online portal to teach the AP-MT subject. A reliable string among the different methodologies talked about is the utilization of e-learning online portal to expand the basic reasoning angle that is expected to effectively get ready for the AP-MT Assessment. The utilization of on the web and PC based e-learning curriculum content has the benefit of enabling the student to learn in a self-managed condition that can at the same time join and bolster the advancement of more elevated amount thinking abilities.

## E-learning Strategies

A wide scope of instructive methodologies can be effectively connected to teaching an AP-MT subject. In spite of the fact that the past study hall experience of most AP instructors gives a significant wellspring of viable information about successful administration and supervision of the secondary school learning condition, certain e-learning provokes identified with teaching MT can be tended to just through cautious thought of the teaching approaches that a student may choose. Various assets are accessible to help students with these educational choices, for assessmentple, the Teaching Resources region of the Webpage of AP site, explicit productions from the High school Board that address the AP-MT Assessment, and the general assemblage of distributed research inside the zone of MT e-learning method.

## Association and General Principles

It is significant that the instructor of the AP-MT subject consider in all respects cautiously the framework and sequencing of the e-learning curriculum content that will be the focal point of student action amid the class. The objectives, goals, and explicit substance of the subject ought to be plainly depicted inside the schedule. The student must distinguish the learning goals that will satisfactorily plan students to accomplish victory when they take the AP-MT Assessment, while additionally mulling over the difficulties and time prerequisites important to adapt new curriculum content and new MT ideas (DuCharme-Hansen & Dupin-Bryant, 2005).

A standout amongst the most significant moves liable to confront the student of an AP-MT subject gets from the wide difference in existing MT learning and abilities between the most developed and the least propelled students inside the homeroom. As a rule, it is important for an AP-MT subject in any case a careful audit of music essentials and to finish up with curriculum content that is adequately best in class to sufficiently get ready students for the more troublesome inquiries on the AP-MT Assessment, particularly questions identified with cutting edge chromatic harmonies and complex musical framework (DuCharme-Hansen & Dupin-Bryant, 2005). Albeit propelled students may feel that the survey of music basics toward the start of the class isn't intriguing or testing, and the underprepared students will be unable to completely partake in the most developed curriculum content exhibited around the finish of the subject, the student of the AP-MT subject must incorporate the majority of this curriculum content in the class to guarantee that every one of the students is allowed a chance to succeed when taking the AP-MT Assessment.

Standard learning activities and formal appraisal exercises, for assessmentple, tests and tests, may help guarantee that both the progressed and underprepared students are keeping up their emphasis on the learning destinations of the subject. Maybe most significant, it is fundamental that the student endeavor to build up a sustaining learning condition in which all students feel welcome and welcomed to learn. A positive learning condition, in which open study hall dissubject is supported, can significantly moderate the difficulties introduced by the wide divergence in student foundations, in this manner urging all students to keep up a functioning and connected with way to deal with learning (Dringus, 2000).

## The techniques of Transcription

The aural aptitudes of the AP-MT Assessment speaks to a significant part of the all out substance of the test. What's more, a different aural component score is accounted for alongside the all out score for the AP-MT Assessment. Therefore, the student of an AP-MT subject must incorporate significant time and substance curriculum content identified with aural abilities inside the schedule and e-learning design of the subject. Two of the particular aptitudes that students are required to learn for the AP-MT Assessment are the types of transcription (Dringus, 2000). These two abilities are regularly trying for secondary school students, and a few students experience significant tension identified with the study of these particular aptitudes.

(Clark et al. 2017) proposed the accompanying teaching tips for students of the AP-MT subject when teaching the aptitude of transcription: urge students to envision the substance of the song dependent on their insight into tonal framework and the idea of tonal tunes; urge students to remember the tune, or parts of the tune, as fast as could be expected under the circumstances; teach students to document bits of the tune when they remember them, instead of beginning toward the start and working around the end; teach students to tune in for recognizable assessmentples and their embellishments; control students toward alternate routes, for assessmentple, recording rhythms independently or documenting the last rhythm as the initial phase during the time spent transcription; and urge students to rehearse outside of class, by dictating natural or prevalent tunes or working with PC based or online transcription-preparing programs (DuCharme-Hansen & Dupin-Bryant, 2005).

Enhancing the students' aptitude level with transcription activities will extraordinarily upgrade their capacity to get the vital dimension of ability with harmonic transcription activities to accomplish victory on the AP-MT Assessment. (Clark et al. 2017) has recommended that it is significant for students of the AP-MT subject to painstakingly design the e-learning arrangement when teaching the aptitude of harmonic transcription (DuCharme-Hansen & Dupin-Bryant, 2005). Students should start with exceptionally basic harmonic assessmentples, typically including just the tonic and overwhelming sonorities, until dominance of this dimension of harmonic transcription is accomplished. Students should then gradually build the dimension of multifaceted nature of the harmonic transcription practices that are endeavored in class until all students accomplish capability at each expanded dimension of trouble. (Clark et al. 2017) depicts various explicit teaching procedures, for assessmentple, requesting that the students retain a gathering of stock melodic and harmonic recipes or teaching the students to predict conceivable harmonic movements dependent on information picked up amid their study of harmonic assessmentination (DuCharme-Hansen & Dupin-Bryant, 2005).

## How to opt for Prima vista

Prima vista is a significant piece of the AP-MT Assessment and considers ten percent of the all out score for the test (Dringus, 2000). Online VR is a solution for this. Albeit numerous students experience significant uneasiness about the prima vista bit of the AP-MT Assessment, teaching the abilities required to prevail in this piece of the test can be a standout amongst the most compensating encounters for the student of the AP-MT test and one of the territories in which the students' aptitudes can most effectively be seen to quickly improve with centered guidance. Orderly practice by singing tunes at sight with the direction of a student is presumably the most ideal approach to improve the prima vista aptitudes of generally students. The student will most likely choose to embrace an arrangement of solfège and musical checking to help the students with building up their prima vista abilities. Albeit any standard solfège framework might be utilized viably, it is presumably best if the student picks one framework and uses just a single arrangement of solfège all through the AP-MT subject, so as to improve the students' feeling of certainty with the chose technique for solmization (Dringus, 2000).

(Clark et al. 2017) has proposed various issues that students of the AP-MT subject ought to think about when teaching the aptitude of prima vista, including the accompanying: (1) the student's dimension of information in music essentials may not be adequately best in class to study the ability of prima vista; as such, the student will be unable to peruse music documentation alright to prima vista effectively; (2) the student will be unable to "hold the tonic"; provided that this is true, that expertise must be grown initial; (3) the student may have a trouble with vocal creation; assuming this is the case, this can be dictated by contrasting the student's expertise at mistake identification to his or her ability at prima vista; (4) the student may experience issues at "coordinating pitch"; provided that this is true, this ability must be grown first. (Clark et al. 2017) talks about a standout amongst the most significant contemplations for any AP-MT instructor, the nervousness that numerous students experience around the issue of prima vista (Delahoussaye & Zemke, 2001). The authors suggests the consideration of some prima vista activities in each class meeting and the progressive incorporation of increasingly troublesome and progressively individual in-class prima vista exercises as the subject proceeds.

## Bass Figuration

Aptitudes legitimately identified with the learning of customary part-writing shows and the capacity to accurately decipher or acknowledge figured bass images speak to a significant component of the AP-MT Assessment. These abilities contain significant pieces of both the various decision and the free-reaction segments of the test. For these regions of the MT educational modules, there is no easy route to the customary strategies for deliberate learning and periodic evaluation of student advance (Delahoussaye & Zemke, 2001).

Conventional part-writing abilities must be adapted altogether and viably for students to accomplish victory when taking the AP-MT Assessment. The best strategy to gain these aptitudes is to intently pursue the arrangement of part-writing learning activities in a generally utilized high school-level course content, for assessmentple, the exercise related. The part-writing practices in a well-designed high school-level course content ought to give a methodical collection of logically increasingly complex part-writing difficulties. Under the supervision of a well-prepared student, this procedure ought to guarantee that the students will secure the fundamental abilities to accomplish a decent outcome on the AP-MT Assessment (Delahoussaye & Zemke, 2001).

I recommend that students of the AP-MT subject build up a generally straightforward rundown of part-writing "governs" that will control the students to perceive and maintain a strategic distance from the sorts of part-writing mistakes that will in all probability be the focal point of the writers and graders of the AP-MT Assessment. Such a rundown of part-writing principles may contain components, for assessmentple, the accompanying: keep away from parallel octaves; maintain a strategic distance from parallel fifths; dodge voice crossing; stay away from voice covering; evade interims of more than one octave inside a synchronization between the soprano and alto voices or between the alto and tenor voices; keep away from a "multiplied driving tone" in any concurrence that capacities as an overwhelming, including auxiliary predominant sonorities; and resolve all harmony sevenths with descending movement in the ensuing resonation. Students ought to likewise build up principles for the treatment of issues, for assessmentple, "direct octaves and fifths," the melodic treatment of the interim of an expanded second, and the treatment of the melodic or harmonic interim of a tritone (Delahoussaye & Zemke, 2001).

Like the procedure of effectively learning the standards of customary part writing, procuring the ability of figured bass acknowledgment requires intensive and methodical study. Furthermore, working through the activities in a well-designed high school-level course content, particularly under the supervision of a decent student, ought to give the student an opportunity to accomplish victory when taking the AP-MT Assessment. The dimension of preparing and experience of the student is maybe the most significant component in furnishing the AP-MT student with the nature of direction that is required to effectively gain proficiency with the ability of figured bass acknowledgment. Students of the AP-MT subject should seriously think about preparing with an accomplished MT mentor to build their dimension of advancement with this expertise or maybe taking a crack at antithesis or composition classes at a close-by high school or university (Delahoussaye & Zemke, 2001).

## Investigation of Scores

Musical investigation is, obviously, the reason for the majority of different aptitudes that the AP-MT student has been working to gain. The student who has accomplished some level of authority, or possibly capability, with music basics, prima vista, transcription, and part-writing shows is just now ready to seriously comprehend the musical works that framework the center of the Western convention of craftsmanship music. When moving toward the aptitude of musical assessmentination, the student of an AP-MT subject should see the procedure as naturally abstract and inventive in nature. Music investigation is totally founded on "higher-level" methods of insight, and critical reasoning is required for even the most essential sorts of diagnostic exercises (Clarke, 2002).

I recommend that students of an AP-MT subject ought to depend intensely on the precedents found in a well-designed and generally utilized high school-level course content. The models highlighted in such a course content, not exclusively will be sequenced to incorporate the most significant theoretical subjects yet in addition will furnish students with generally available instances of the most significant diagnostic ideas. Also, most course contents give answers about or clarifications of the general theoretical rules that every model is expected to express (maybe in the reference section, however frequently in the body of the content). Since music assessmentination is essentially an open-finished scholarly procedure, the investigative study of musical scores is a decent opportunity for the AP-MT student to empower a free and stretched out homeroom talk in connection to every musical work chose for assessmentination (Clarke, 2002).

## Extensive Musicianship

AP-MT instructors ought to know about the academic issues that have molded the idea of high school-level MT guidance amid the previous century, since a significant part of the substance found in the AP-MT Assessment is firmly identified with at least one of these general ways to deal with MT guidance. The (Clark et al. 2017) gives an exhaustive talk of a considerable lot of these significant instructive standards (Clarke, 2002). A genuine case of one of these truly significant academic conventions is the "exhaustive musicianship" way to deal with teaching MT (joining singular zones of study, for assessmentple, music writing, harmony, antithesis, assessmentination, music history, directing, arrangement, console abilities, and connected music, into a single, coordinated "MT" e-learning grouping). Teaching Approaches in MT gives a magnificent authentic and applied synopsis of the far reaching musicianship approach that is legitimately applicable and important for AP-MT students, since the AP-MT subject itself speaks to a consolidated assessmentination and aural aptitudes educational modules (Clarke, 2002). What's more, a significant number of the e-learning proposals that are for the most part offered to AP-MT students identify with coordinating the different components of the AP educational modules, a thought that intently relates to the far reaching musicianship way to deal with teaching MT (Clarke, 2002).

## Need of Developing Critical Thinking Skills

The inventive and imaginative utilization of e-learning online portal and PC based guidance may enable students to investigate the ideas that they are learning in a self-managed condition, an e-learning setting that empowers the advancement of higher-level critical reasoning aptitudes (Ali, 2003). Studies hav recommended that the best possible utilization of e-learning online portal may serve a significant healing capacity for approaching high school green bean regarding narrowing the "basics hole." (Ali, 2003). In view of the proposal of using e-learning online portal to limit the hole as far as expertise levels, PC based guidance may likewise have the option to significantly mitigate the challenges looked by students of the AP-MT subject when teaching high school classes that incorporate students with incredibly changing dimensions of MT and musicianship aptitudes.

Students of AP-MT are frequently tested by both the unpredictability of the ideas that they are relied upon to learn and the occasionally conceptual nature of these thoughts. For some students, the immediate involvement with music that they have recently experienced amid the study of aptitudes quickly connected with musical execution does not legitimately make an interpretation of in important ways into the scholarly condition of customary MT classes. The trouble may get from the partition between the students' view of musical framework and the comprehension of these ideas for the most part held by composers and music theorists. Notwithstanding methodicallly teaching the substance of the AP-MT educational programs, AP students may profit by considering higher-level "critical reasoning" aptitudes when creating e-learning curriculum content and deciding the design of their subjects (Ali, 2003).

# Discussion

Online, interactive and reflective self-study learning programs utilize course administration frameworks to sort out and convey content and also oversee course works. Second Life speaks to another medium on which to draw in and work together with students or have students connect with associates. At a quick level, this one of a kind advanced virtual world takes into consideration more unpredictable social connection as it presents individual expression through virtual symbols that bring virtual non-verbal correspondence and association. At more mind boggling, all around arranged levels, Second Life turns into a dynamic learning environment where self-investigation, virtual visits, and access to a differing set of clients are effortlessly open and accessible.

Online and interactive portal for self-study is an awesome approach to permitting students who are scattered topographically to exploit a class that does not oblige eye to eye classroom direction. While the innovation is set up to encourage online and interactive portal for self-study, the genuine class encounters of customary distance learners can be not as much as fulfilling for the student and the teacher. From the student's point of view, it is harder to frame associations with others in the class and the educator. While the materials might be completely secured and the assignments finished, reviewed and returned electronically the general experience does not have the sort of association students feel in a standard class. Second Life and other virtual environments help connect this hole by giving students the sentiment being available with different classmates and with the teacher.

They can converse with each other amid class in private texting and make inquiries of the educator as the inquiries normally emerge out of the lesson arrange. In spite of the fact that this is as yet a type of electronic correspondence, it makes a shared affair with the students and teacher. It is hard to clarify the association, however, one of the Linden Labs workers, Pathfinder Linden, calls this association "enthusiastic transfer speed." It includes a component of profundity that can't be accomplished in a standard online and interactive portal for self-study circumstance. Another way that Second Life and other virtual environments will affect online and interactive portal for self-study is to empower a more noteworthy assortment of classes to be educated. In a VR environment, educators may now show direction and additionally address, and students may cooperate to make extends inside the virtual world.

With access to a more noteworthy number of worldwide inhabitants the open door for cooperative energy and coordinated effort grows. The innovation of 3D virtual paradigms is extended and enhanced, and numerous private and open associations are making virtual spaces that some time or another will be entwined much like web pages of today. These early investigations of education in Second Life will manufacture an establishment for virtual education without bounds.

## Conclusion

Conclusively, it can be stated that VR could enhance scholarly execution and emotional quality. Also, the outcomes have added to the restricted discoveries on the adequacy of VR paradigms against non-VR instructing. Indeed, the outcomes have demonstrated that the student-focused learning approach with VR was more successful. Students in the VR assemble profited subjectively as well as have more inspirational mentalities and in a more positive condition of feeling while at the same time learning with VR. However, VR ought not to be viewed as a panacea that backings a wide range of learning circumstance, yet its capacity as a compelling guideline mediation for showing a few things which are theoretical and hard to instruct and learn ought not to be thought little of.

Besides, the new era in schools is a computerized era where VR Paradigms has moved toward becoming some portion of regular daily existence. VR innovation ought to in this way be considered as an option method for giving guideline inside auxiliary and distant classrooms. Furthermore, it is also recommended that further research may consider the human component to explore how learner attributes to associate with the elements of VR-based learning paradigms in which the outcomes would profit individualized learning. Moreover, the Literature review and critical analysis have shown how VR upgrades the learning viability are prescribed. Additionally, researches have also shown a positive feelings experienced in VR learning paradigms that would enhance the intellectual and emotional learning experiences of the students

The discoveries from this study upheld the general speculation that VR learning environment emphatically influences the subjective and full of VR paradigms of learners. Furthermore, the students performed comparatively better in VR learning paradigm. Nonetheless, some exploration discoveries demonstrate no conspicuous advantages of utilizing VR learning paradigms over conventional guideline in light of students' science accomplishment. Furthermore, it was contended that secludes those researches that cover cognitive and practical exercises and in which students could effectively include in the learning procedure can upgrade the impact of VR Paradigms helped in enhanced learning experiences.

Furthermore, these simulated and VR-based exercises were incorporated in the product utilized as a part of this study where the students did the virtual analyzation and upgraded their comprehension by finishing the lab report that scaffolded their comprehension. It is conceivable that these helped students to get a handle on logical certainties and ideas all the more effortlessly. Also, students controlled their learning pace and effectively required in the learning exercises since they settled on their instructional choices, encounter and in charge of the results of those choices. Consequently, dynamic and self-guided learning could be the fractional cause concerning why students' learning accomplishment was better in the VR-based learning environment.

Thus, the aftereffects of this study demonstrate that it is all the more intense to bolster science learning with VR innovation than with the conventional technique. The outcomes likewise have a clear sign that VR innovation was viable in boosting the students' full of feeling conduct and the impression of their learning background. Similar outcomes were acquired in (Swan 17). The higher recognition in learning quality in the VR bunch shows that VR was viewed as an educational device that could upgrade learning and make learning all the more fascinating and fortifying. The learning exercises in the VR-based learning environment were seen as important, and the learning knowledge with VR innovation has made the students intrigued to learn more. These positive learning dispositions are basic for fruitful learning accomplishment.

Similarly, students in the VR assemble showed substantially higher fulfillment in learning. This could be because of the positive feelings created amid learning. It was demonstrated that positive feelings experienced amid learning enhance learners' execution, fulfillment, and discernment towards learning (Swan 17). Learning will probably happen with a positive condition of feeling since learners make the more useful judgment as they translate circumstances all the more emphatically (Boulos et al. 235). The stylish components, for example, hues, format and realistic representations of the VR learning material could be the halfway reason for the beneficial outcomes on saw learning quality and fulfillment. Thus, VR learning paradigm has given a priceless and effective learning knowledge for students.

So as to raise a learner's accomplishment it's basic to outfit the learner with a solid and firm establishment of the fundamental abilities just as rouse them to learn. Online integrated portal can assume a significant job in encouraging the accomplishment of this objective. Online integrated portal draws in learners through terminating of their creative energy. Online integrated portal encourages instructors to animate the brains of youthful learners so that makes them to have significant and enduring change (Vurela & Nummenmaa, 2004). There are various research studies that have been directed on the effect of online integrated portal on the accomplishments of learners in the learning procedure; the discoveries of these explores have exhibited amazing likenesses of the outcomes. This paper has completed an audit of the literary works on this idea and has uncovered the accompanying ends:

* Learners, particularly the individuals who have a few disadvantages throughout everyday life (learners with exceptional necessities), learn essential aptitudes which incorporate writing, perusing and math quicker and better on the off chance that they get an opportunity to try the abilities through utilization of online integrated portal.
* Online integrated portal figures out how to connect with learners; when learners are using online integrated portal to learn, they will in general be snared to online integrated portal consequently investing more energy learning the essential errands instead of the remainder of the learner who don't utilize online integrated portal (utilize progressively conventional techniques).
* Online integrated portal gives a instructor an opportunity to individualize the training educational programs and alter it with the goal that it fits to the requirements of an individual learner; this encourages the learners to accomplish their potential.
* Learners who gets opportunities to utilize online integrated portal are presented to learning through online integrated portal depict a propelled dimension of learning understanding and a higher probability of putting into training what hello realize in their lives (Vurela & Nummenmaa, 2004).
* Through the introduction to online integrated portal in the learning procedure learners can get to a more extensive scope of communication media in the statement of their thoughts and in an all the more clear and ground-breaking way.
* The introduction to online integrated portal influences learners to build up a connection to instruction and learning and thus non-appearance and dropout rates are decreased to close to zero. Learners are roused to encourage their studies and join colleges subsequent to moving on from high schools (Vurela & Nummenmaa, 2004).
* The self regard of learners is intensified in the event that they gain from technological presentation. When they figure out how to try what they realize, they feel propelled to share that information and look for further learning. They increase more noteworthy certainty and capacities in their approach to difficulties (Vurela & Nummenmaa, 2004).

Online integrated portal is setting down deep roots. In the world that we live in practically all areas have utilized online integrated portal in the undertaking to improve their yield; beyond any doubt enough the advantages of online integrated portal are clear enough. In the instruction framework there has been little advancement in the work of online integrated portal in learners learning (Clark et al. 2017). The explanation for little application of online integrated portal has been absence of enough proof to elucidate whether online integrated portal whenever utilized in the learning of learners has any effect. There are differentiating sees identifying with this inquiry. The different partners in training (instructors, government, administrators, governors) have after some time pondered in the case of putting resources into online integrated portal in organizations of learning is the most appropriate activity in the undertaking of improving the learning framework. This paper has accumulated data from different sources supporting that the work of online integrated portal in the learning framework has incredible positive effect on the learners learning process (Clark et al. 2017).

As indicated by the auxiliary information that have been accumulated through writing audit, the work of technology in the learning procedure has gigantic effect in upgrading the learning of learners. The studies led have distinguished that learners who are presented to technology in their day by day inclining exercises have an expanded normal presentation in their government sanctioned test instead of their companions who utilizes conventional techniques to study. The studies have likewise distinguished that the learners presented to technology comprehends ideas all the more effectively and can try what they realize (Clark et al. 2017). Therefore their self regard is helped and they can improve. Technology introduction makes learners to grow greater connection to adapting thus non-attendance and dropout rates are diminished. Learning turns out to be increasingly autonomous and learners invest more energy studying, and notwithstanding increasing more extensive information.

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