Research Article

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WIRELESS TECHNOLOGY IN CLASSROOM

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Abstract:
In this article, an online virtual surroundings to growth scholar contribution in a lecture room teaching scenario is offered. The supplied coaching environment permits college students to give unidentified immediate comments to the teacher. Instructor see the response straight away and has an opportunity to react depending at the given remarks. The surroundings is primarily based going on the usage of cutting-edge Wi-Fi conversation technology.

1. Introduction
The real problem in a everyday mastering surroundings is the shortage of instantaneous remarks. some of college student be too shy to contribute actively on getting to know with the aid of commenting the presentation, offering their ideas or asking questions. especially on guides with tens or loads of college students this is a large trouble. teachers might not word students' susceptible knowledge on a specific difficulty until verifying their checks - that's genuinely too late. A opportunity to react earlier for this would be beneficial for each college students and instructors. The goal for the challenge become to put into effect gadgets that help to increase the interplay among the instructor and the scholars by the usage of cutting-edge technology.

Technologies themselves aren't the primary subject but they provide one viable method to acquire the given intention.

The implemented digital surroundings have to be applied at some stage in the instructions to present the student a danger to have a immediate impact on the lecture topics. The blessings from instructor's factor of view are unquestionable. teachers frequently have troubles to estimation their student's responsiveness of present trouble. Frequently they provide an explanation for problem they observe difficult to recognize very precisely and do now not always pay attention to the less difficult troubles.
Sometimes even those issues can be hard to recognize. Our technique does no longer eliminate the trouble, but with any luck makes it less difficult intended for the instructor to recognize it. As coaching is discussed on this booklet, it should now not be considered to be restricted to a excessive faculty or college environment. The remarks gadget may be applied to company environments or even kindergarten as appropriate generation is likely to grow to be to be had in the close to destiny.

2. Related work

One of the primary step on practical interactive lecturing turned into "lecture room conversation gadget". It permitted the instructor to provide query all through the lecture and observe the figure. It be relatively hardware established accepting most effective a positive type of devices with a hard and fast wired network. It particularly changed the conventional quizzes with an automatic approach. It solved only a few elements of the complete trouble. One step onward is the "student response machine (SRS)", a server-aspect web utility, which requires most effective a network browser on client facet. Quizzes can be answered with hand held computers thru Wi-Fi networks. The consequences can be visible as charts and may be projected to college students. This technique only restore wired hyperlinks with Wi-Fi ones. "Ubiquitous Computing in education (UCE)" is a assignment under attack also intended for non-gift individuals. The execution is constructed to live run in Java digital device to sustain platform independency, Despite the fact that may additionally purpose a few harms. structure consists of e.g. voting, on line comments and question college of generation has undertaking referred to as "Open customer Lecture interaction (OCLI)". Their technique could be very just like ours; students can send questions at some stage in the speech, can publish ratings and the instructor know how to do assessments on line. The technique utilize by OCLI and primarily support on extended Markup Language (XML) and Extensible fashion sheet Language Transformation (XSLT), need only the tool by an internet browser and wireless utility Protocol (WAP) permit cellular Smartphone beginning of the purchaser. despite the fact that the provider is relevant to approximately any machine with the browser, the WAP technique may additionally growth the difficulty of the gadget. active Campus college presents a few digital classroom schooling, known as lively magnificence, as division of their university grounds community. The users be the usage of private virtual Assistants (PDA) with a WLAN link. The simple concept of the consumer-server type utility is scholars the usage of portable, Wi-Fi communique gadgets can incognito ask questions, reply polls and provide lecturer comments in the magnificence. Gadget isn't always designed for
distance learning or for use in laptop-equipped lecture room. active magnificence is browser-primarily support web software intended for use in PDAs Wi-Fi technology to apply interactive studying atmosphere students want policy all the way through which they know how to use the carried out services. growing wide variety of laptops and PDAs a few of the students provide a alternate to use the online gaining knowledge of of within the close to destiny. maximum of scholars contain a 31 cellular mobile phone of their individual and imparting an boundary to be make use of by the portable phones could provide a opportunity for still more college scholar to apply the repair these days. In our technique together Bluetooth and Wi-Fi limited place community (WLAN) can be verbal exchange strategies for the net digital environment.GSM small messages can be use as maximum student personal previously suitable gadgets. Best WLAN get admission to carried out to date? Bluetooth is an wireless facts communication tools that present a link with 2 or greater gadgets at a small space. within the future will maximum possibly to blanketed in lots of electrical procedure, along with cellular phone, laptops & private virtual supporter. That create it feasible to make use of them to peer-to-peer gadgets in brief detachment within a school room. institution job all through the speech may be very good quality instance of short variety verbal exchange.

• The usage of Bluetooth as verbal exchange technique students resolve now ought to give any price for take part the coaching. WLAN generation offers th trade attach interested in limited region system lacking plug rightn stressed LAN partition opening. Toward function WLAN system desires an admission factor while which statistics were routed to internet which might be a warning thing lecture room perform no longer contain a WLAN get entry to. Gain of WLAN is superior coverage location that makes it possible to attach the whole lecture room scholar interested in the similar dialogue. WLAN link to the system may be hooked up by way of a WLAN-card this is established into a Personal computer or a PDA. in step with cellular trade internet Nokia have plans to include the WLAN get right of entry to addicted to a few of their portable phone fashions inside destiny. SMS communication can be dispatched by mobile phone. Of cell telephones running in GSM community in Europe are tall, specially amongst college scholar, in addition to physical coverage. Offers the chance to make use of wireless offerings to the maximum of under attack human beings. completion isn't hassle, however query if the students are inclined to pay the fee of SMS messages for the offerings is absolutely some other trouble. Duration of a quick message is restricted to 140 characters even though new phone fashions can split longer mail in a couple of portions. The maximum duration and disagreeable type of mail by the
maximum of presently old gadgets can also be seen as poor aspects of (trendy Packet Radio offerings) work in GSM system. Gives a packet - based totally wireless verbal exchange service to the net for mobile phone and laptop users. In theory the velocity of GPRS connection may be more than 100 kbit/s however sharing awful with other users decreases the actual bit price lower. GPRS is in idea a less expensive preference compared to old style circuit-switched statistics connections. Infrared facts verbal exchange is playing an crucial role in Wi-Fi records communiqué among laptop-, PDA- and cell Smartphone-users. Infrared connection in exercise needs a clear way with none barriers between receiver and sender. It is basically used to connect gadgets into every other and moving data among gadgets cannot naturally be charged.

Access Point

**Client Adapters.**

4. CASE: growing interaction through modern-day era

We have constructed up a device that gives a opportunity for the scholars to affect the learning state of affairs. We provide modules that can be used to assist one-of-a-kind events all through the 32 presentation. due to the modularity of the gadget, new features will be rather clean to encompass into current systems. In our method WLAN is used to provide the students can get entry to public network. the scholars want to have an get right of entry to the server wherein the net utility is mounted. Positioning has been taken into consideration as a technique for checking if pupil is present in the lecture corridor in which the lecture is given. this will save you get entry to from those college students which can be bodily no longer gift. The necessities for this form of authentication are that the network operator has to provide the person places to the services and the carrier has to be granted with the aid of the pupil to offer the get right of entry to to his positioning information. The currently applied modules are presented inside the following list: 4.1 Presentation slides available for everyone these days most of the presentations are given in electric shape (ppt, pdf). the use of the capabilities of this software, teacher can easily percentage the presentation for college kids via uploading it into the server, so college students can then have the slideshow downloaded for their private devices before the lecture. college
students may also alternate the content material of the presentation they have got or add some notes in their own many of the teacher’s presentation. teacher does no longer must have any in addition understanding of computers; the capability of the usage of web-browser is sufficient.

4.2 pupil comments and questions

Students actually have a opportunity to provide comments and make questions. The unique idea turned into that the display projected into canvas divided into separate frames? In the most important body is placed the maximum critical factor, the presentation. all the questions will be published next to the running slideshow, so that each one the members, in addition to teacher, have a opportunity to peer them and to comment. all of the questions are stored into the database in which they can be observed later and probable be replied later if now not for the duration of the lecture.

![Figure-1: Principles of the functionality.]

4.3 Lecture evaluation

College students also can examine the presentation with the aid of giving votes. Teacher sees the results from the selected interval as a actual-time diagram at the canvas. poor assessment throughout a quick length indicates a need to explain real issues extra exactly. In conventional getting to know environment a few students may also raise questions and demand greater clarification however regrettably this doesn't occur too often. This information also with the timestamp is saved into the server so getting statistics or drawing a parent of votes and average is feasible for instructor.

4.4 Student evaluation

Instructors do now not necessarily know whether or not the students simply have understood the troubles in a manner trainer desired them to. trainer now has a easy manner to create an internet quiz to look at over understanding. compared to old fashioned random checks given in paper the precis of results can now be visible right away through a web-shape.
For instructors it offers a opportunity to react, if the effects demonstrate that the students have not understood the issues nicely sufficient. Quizzes might also carry out as part of final grade for the scholars. On mass guides having a random check and evaluating them takes really of instructor's time – quizzes with more than one answer alternatives eliminates this downside from instructors. Parent 1: concepts of the functionality determine 1 describes the relationships and capability of the service. all of the statistics among college students and the teacher goes via an internet server, wherein it's miles stored for later analysis. Because normally there is no wired connection to network present for students, they connect mobile. Teacher instead normally has a wired connection that he can use to run the service.

**Figure 2: Screenshot from the presentation projected into the canvas.**

The instructor's view shown inside the canvas is represented in determine 2. in the top-left frame is proven the cutting-edge slideshow. The proper frame includes the outcomes of college students' evaluation of the presentation. inside the bottom frame are proven the questions and feedback dispatched via college students. with the aid of putting all the applicable records into one framed display we lower the want for additional overhead projectors.

**Figure 3: consumer (pupil’s) interface.**

The person interface of the provider this is represented in discern three is stored as simple as feasible. through doing this we intention that the carrier is platform independent. The content is located on the decrease and larger frame, upper body is used for navigation rather. there may be no need to put in any applications at the clients, just a easy web browser and connection into the network is all we want. to test this schooling surroundings in practice some PDAs with community access will be supplied to college students at some point of the lecture. college students can then use these devices to take part the online teaching. based on the experiences and comments probable some changes are made. As a end result it could be seen if this sort of provider is helpful from equally teachers' and students’ point of view.
• **Ease of motion**

Laptops allow for clean movement inside a classroom or anywhere across the campus. Because of size and portability, laptops offer enough computers in a classroom to make using a pc a useful coaching utility. Whilst a generation lesson is over, the laptops can simply be positioned away. other classes can then retain with little interruption.

• **Strategic deployment**

Wireless laptops make it easy to put computing energy wherein it'll do the maximum accurate and optimize each use and high-quality of reason. moving computers in which they're wished permits a college to reduce its hardware budget whilst slowing down the buying and alternative cycle, rather of having some computers in every study room getting used every so often, fewer laptops may be purchased in an effort to be utilized extra regularly.

• **Flexibility**

Wi-Fi notebook computer systems can be used in many one of a kind ways to guide a lesson, with shape following characteristic and motive. Laptops may be deployed throughout a study room in lots of one of a kind approaches, thereby allowing them to healthy the contours of the one of a kind rooms without causing any extra litter. Laptops permit the trainer to execute the lesson while not having to move furnishings or alter the prevailing norms and techniques. The more comfortable and acquainted the lecture room enjoy turns into with new technology, the more likely it'll be used.

• **Low profile**

Wireless notebook computer systems sit low, keep a low profile, and permit teachers to preserve a watch on their college students. Their small length, makes it is simple to maintain song of college students development as they paintings. Instructors can effortlessly tell whether a pupil is harassed and wishes some attention.
• Simplicity

Wi-Fi pocket book computer systems do no longer require a good deal within the unique attempt or understanding, and they are smooth and secure to apply. Laptop and community reliability has progressed and the usage of computers has grow to be greater attractive. The threat of everyday use is now significantly better by their simplicity, comfort, and reliability. The gadget is simple to use, which permits instructors to pay attention on teaching; no hassle capturing required. Handing out laptops isn't always a good deal extra stressful than the checking out of library books. Laptops can sit down on a table and not using a greater mess or trouble than textbooks. There are no extra cords and cables – which can be difficult. The simplicity of computer computers is much less in all likelihood to cause hassle and teachers with a low tolerance for ailment and chaos will recognize this generation. Wi-Fi laptops are a massive asset to the revolution in facts technology studying this is taking location in our lecture rooms. know-how the pluses and minuses of computer use are vital to the successful introduction of laptops in the classroom.

6. Conclusion

This paper provides an concept wherein virtual surroundings is added as a part of online coaching experience. This surroundings makes use of contemporary Wi-Fi communiqué technology like Bluetooth and WLAN to boom interplay among the students and the instructor. WLAN era has been brought on an current digital environment and capabilities like lecture assessment, pupil evaluation via quizzes, questions and presentation material are implemented. thru this surroundings the trainer will have higher expertise (grading) of students and can enhance (individualize) the lectures. College students may also have an effect on the content material and presentation of lectures and sooner or later get better knowledge on the difficulty.

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