Industrial Engineering Journal
ISSN: 0970-2555
Volume : 53, Issue 12, No.4, December : 2024

POINT QUEST: CENTRALIZED PLAT FORM FOR COLLEGE CLUB ACTIVITIES

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ABSTRACT
PointQuest addresses challenges faced by educational institutions in managing club events, student activities, and communication. Existing manual systems like spreadsheets and isolated tools create inefficiencies, fragmented communication, and reduced participation. PointQuest introduces a centralized,role-basedplatformforseamlesseventmanagement,automatedactivitytracking,andreal- time communication. Built using Next.js and Supabase, the system features robust data handling, secure authentication, and user-friendly interfaces tailored for students, faculty, and administrators. Key results demonstrate significant improvements in event organization, student engagement, and transparency.Theplatform'sscalabledesignenablesfutureenhancements,suchasadvancedanalytics and leaderboard systems.
Keywords: Event Management, Club Management, Student Activity Tracking, Next.js, Supabase, Tailwind CSS

INTRODUCTION:
Effective management of student activities and college events is crucial for fostering engagement, improving communication, and streamlining administrative processes in educational institutions. Traditional methods, such as spreadsheets, email chains, paper-based systems, and scattered social media announcements, often fail to meet the growing demands of students, faculty, and event organizers.Theseoutdatedpracticesresultininefficiencies,miscommunication,andpoorparticipation tracking,causingfrustrationamongallstakeholders.Facultymembersstruggletomonitorandevaluate student extracurricular activities, while students face challenges in accessing comprehensive event details and tracking their involvement. The absence of a centralized platform exacerbates these challenges, as event management remains fragmented across multiple tools. Organizers often encounter difficulties in maintaining accurate records of participants, managing event logistics, and fostering student engagement. Additionally, manual methods for allocating activity points—used to measure student participation—are error-prone and time consuming. The lack of automation and integration prevents institutions from achieving transparency, scalability, and efficiency in managing extracurricular activities. To address these issues, the PointQuest platform introduces a unified, user-centric solution for college club and event management. PointQuest centralizes event creation, tracking, and communication within a single web-based platform, enabling seamless interactions amongstudents,faculty,andadministrators.Thesystemsimplifiestheprocessesofeventorganization, student participation tracking, and activity point allocation by automating repetitive tasks and providing real-time updates. Faculty members gain access to detailed reports on student engagement, while students can effortlessly browse events, register for activities, and monitor their progress. Developed using modern web technologies, including Next.js for both the frontend and backend, Supabase for database management, and Tailwind CSS for responsive design, PointQuest ensures scalability, security, and performance. The platform supports role-based access control, with

tailored
features for students, faculty, Board of Directors (BOD), and administrators. By providing a comprehensive and robust solution, Point Quest aims to bridge the gap between existing to olsanduser needs, fostering greater participation, improved communication, and efficient event management.

LITERATURE:

Existing Event Management Platforms:

Several event management systems have been developed to address challenges in organizing and tracking student activities. These platforms offer varying levels of functionality, but most fail to integrate role-based access and automated participation tracking:

1. **Breeze [1]:** Breeze is an Android-based application that provides real-time updates, secure logins, and tools for event management. It integrates features like query handling and attendance tracking. However, Breeze lacks comprehensive role-based access control and automated activity point management, which are critical for scalable event management systems.
2. **VNR Connect [3]:** VNR Connect is a mobile application designed to simplify event registrationandcoordinationincolleges.Itallowseventorganizerstomanageregistrationsand post-eventupdates,suchasresultannouncementsandphotos.Despiteitseffectivenessinevent management, VNR Connect does not support student activity tracking or provide tools for faculty to monitor participation.
3. **Evecurate [2]:** Evecurate leverages Flutter and Firebase to create a smart event management application with features like QR-based registrations and interactive feedback mechanisms. While it streamlines event organization, it does not include faculty tools or centralized data management for student participation tracking.

RESEARCH GAPS:

While existing systems address specific challenges in event organization and communication, they exhibit several limitations:

4. **Lack of Role-Based Features:** Most platforms focus solely on student and administrator functionalities, overlooking the role of faculty members. PointQuest bridges this gap by providing faculty with tools to track student activity points and participation history.
5. **Manual Activity Tracking:** Current systems rely on manual input for tracking participation points, which increases administrative workload and introduces errors. PointQuest automates this process, ensuring real-time updates and accuracy.
6. **Scalability Issues:** Many event management systems struggle to handle increasing user demands. PointQuest leverages modern technologies like Supabase and Next.js to provide a scalable solution capable of accommodating future enhancements.
7. **Fragmented User Experience:** Existing systems often lack intuitive designs, resulting in fragmented user experiences. PointQuest prioritizes user-centric design, ensuring a seamless and responsive interface for all stakeholders.

OVER VIEW OF LITERATURE REVIEW

The review of existing systems highlights the need for an integrated platform that addresses the limitations of current solutions. Point Quest distinguishes itself by offering a centralized, role-based systemwithautomatedparticipationtracking,real-timenotifications,andscalablearchitecture.By incorporating these features, Point Quest provides a comprehensive solution for managing college events and student activities effectively.

METHODOLOGY:

The methodology for the PointQuest platform development follows a mixed-methods approach, combining qualitative and quantitative research techniques. This ensured a comprehensive understandingofuserneedswhilevalidatingtheplatform'sperformanceandscalability.Theapproach was divided into five distinct phases: requirements gathering, design, development, testing, and deployment.

RESEARCH DESIGN:

The Point Quest plat form was developed following a mixed-methods research design, combining both qualitative and quantitative methodologies. This approach was selected to ensure a comprehensive understanding of the problem domain—inefficient club event management and student participation tracking—and to validate the effectiveness of the proposed solution. The qualitative aspect involved understanding user needs, challenges, and expect at ions through surveys and interviews conducted with students, faculty, and administrators. On the other hand, the quantitative aspect was implemented through the development and performance testing of the platform, ensuring efficiency, scalability, and accuracy of the system's features.

THERE SEARCH DESIGN INCLUDED THE FOLLOWING PHASES:

1. **Problem Identification:** Qualitative data was collected through focus groups and interviews to identify inefficiencies in the traditional club and event management processes.
2. **Requirements Gathering:** Both qualitative user requirements and quantitative system performance goals were outlined.
3. **Prototype Development:** A wire framed and interactive proto type was created togather iterative feedback from users.
4. **Development and Testing:** Usingmodernsoftwaredevelopmenttechniques,theplatformwas built and rigorously tested for performance, usability, and scalability.
5. **Evaluation:** Post-development, system usability and performance metrics were measured to ensure alignment with stakeholder expectations.

This mixed-methods design allowed for a robust understanding of the problem while validating the performance and user-friendliness of the proposed solution.

Methods of Data Collection and Analysis

The data collection and analysis process for Point Questinvolved several techniques to gather user input, measure platform performance, and ensure effective delivery of the research outcomes.

QUALITATIVE DATA COLLECTION :

6. **Surveys and Interviews:** Structured questionnaires were distributed to students, faculty, and administrators to capture detailed insights into their pain points regarding event registration, participation tracking, and communication challenges. Semi-structured interviews were conducted to understand stakeholders' expectations from the platform.
7. **Focus Group Discussions:** Focus groups consisting of 6-8 students and faculty members were organized to gather feedback on wireframes and mock-ups of the proposed system.

QUANTITATIVE DATA COLLECTION:

1. **System Performance Metrics:** Metrics such as response time, data retrieval speed, and database query efficiency were collected to measure the system's performance under varying loads. Tools such as Postman and Apache JMeter were used to simulate load testing.
2. **UsabilityTesting:**Atask-basedusabilitytestwasconductedwhereparticipantswereaskedto

perform key operations like event registration, points tracking, and certificate downloads. Metrics such as task success rate, error rate, and completion time were analysed.

3. **User Engagement Data:** Engagement statistics such as event participation rates, points awarded, and feedback collection were measured during the beta testing phase to assess user adoption.

TOOLS, SOFTWARE, AND EQUIPMENT USED

To build, analyse, and validate the Point Questplatform,moderntechnologiesandtoolswereemployed toensureefficiency,scalability,andreliability.Theselectionoftoolswasdrivenbytheneedforrapid development, seamless user experience, and robust backend infrastructure.

8. **Frontend and Backend Development**
   Next.js: The frontend and backend were built using Next.js, a React framework enabling server-side rendering (SSR) and API endpoints. This choice facilitated faster page loads, dynamic routing, and improved SEO for the platform.
   Tailwind CSS: A utility-first CSS framework was used for responsive and modular UI design, ensuring consistency and customization across devices.
9. **Database Management**
   Supabase(PostgreSQL):Supabasewasemployedasthebackend-as-a-serviceplatformfor managing user authentication, event data, and student records. Its real-time capabilities ensured instant updates on event registrations and point allocations.
10. **Testing and Debugging Tools**
    Postman:UsedtotestRESTAPIendpointsforeventdataretrieval,registrationworkflows, and points tracking.
    Apache JMeter: Conducted load testing to measure the system's performance under simulated concurrent user traffic.
11. **Proto typing and Design**
    Figma: Wireframes and UI mock-ups were created using Figma, providing an interactive design experience for users during the prototyping phase.
12. **Data Analysis Tools**
    Excel and Google Sheets: Used for analysing survey results, usability metrics, and beta testing feedback.
13. **Version Control and Collaboration**
    GitHub: Managed the source code, enabling version control, team collaboration, and integration with automated deployment pipelines.

SAMPLE SIZE AND STUDY POPULATION:

The study population comprised students, faculty, and administrators from a college institution who weredirectlyimpactedbytheinefficienciesintraditionaleventmanagementsystems.Thesamplewas carefully selected to ensure representation from all user roles:

- **Students:** 50 students from various branches and years participated in the study to test and validate the event registration, activity points tracking, and certificate download features.
- **Faculty Members:** 10 faculty members were involved to evaluate the student performance tracking and data validation functionalities.
- **Board of Directors (BODs):** 5BODs (faculty coordinators and club leaders) were engaged to assess the event creation, point allocation, and club management features.
- **Admins:** 2system administrators participated to ensure smooth operation, user role assignments, and troubleshooting.

EXPERIMENTAL SETUP:

The experimental setup for Point Questin volved deploying the plat form on a cloud-based environment to simulate real-world usage scenarios. The key steps in the experimental setup included:

14. **Deployment Environment**
    The system was deployed on Vercel, a cloud platform optimized for Next.js applications, ensuring seamless hosting and scalability.
15. **Simulated Workflows**
    Events such as workshops, competitions, and webinars were simulated to test event creation,registration,andpointsallocationworkflows.Testparticipantsinteractedwiththe system over a 7-day testing period.
16. **Load Simulation**
    ConcurrentUserTests:UsingApacheJMeter,theplatformwastestedforperformancewith 100 concurrent users to measure response times and data retrieval efficiency.
    Database Stress Testing: Supabase was stress-tested to ensure data consistency and performance under high loads.
17. **Testing Scenarios**
    Students registering for events, downloading certificates, and viewing participation records. Faculty searching for students using USN, tracking points, and viewing certificates. Admins creating new clubs, assigning BOD roles, and managing users. BODs adding events, updating details, and awarding points to participants.

ANALYSIS PROCESS :

After collecting both qualitative and quantitative data, the following analysis methods were employed:

18. **Survey and Interview Analysis:** Responses were coded, categorized, and analysed to identify common themes, user pain points, and platform expectations.
19. **Usability Metrics:** Metrics such as task success rates, time-on-task, and user satisfaction scores were compiled and analysed to measure the platform's usability and performance.
20. **Performance Data:** Quantitative performance data, such as server response times, query execution times, and resource utilization, were collected and compared against bench marks to validate system efficiency.
21. **Engagement Metrics:** Data from event registrations, points allocation, and feedback submissions were analysed to evaluate user engagement and platform adoption rates.

RESULTS:

The development and deployment of Point Quest provided action able in sights in to how an automated, centralized platform can streamline event management, student activity tracking, and faculty monitoring. The findings are based on usability testing, system performance metrics, and user engagementdatacollectedduringthebetatestingphase.Eachusergroup—students,faculty,Boardof Directors (BODs), and admins—demonstrated significant improvements in task efficiency, reduced manual efforts, and enhanced satisfaction.

USABILITY TESTING RESULTS :

The usability testing phase aimed to evaluate the user experience for various features of the Point Quest platform.Itinvolved50students,10facultymembers,and5BODsinteractingwiththesystemovera 7-day period. The following results were observed:

STUDENT PORTAL EXPERIENCE:

1. **Event Registration Efficiency:** The time taken for students to register for an event reduced

Industrial Engineering Journal
ISSN: 0970-2555
Volume : 53, Issue 12, No.4, December : 2024

drastically compared to traditional methods. Previously, event registration required manual form-filling, which took approximately 10-15 minutes per registration. With PointQuest, students could register within 1-2 minutes using a single-click "Register" button.

2. **Participation Tracking:** Students expressed satisfaction with the Dashboard feature, which provided real-time updates on their activity points and event history. Approximately 92% of the students reported that the dashboard helped them track their extracurricular achievements efficiently.
3. **Certificate Download:** The ability to download event certificates directly from the platform was a standout feature. Previously, students had to wait for manual distribution, often taking 2-3 weeks. With Point Quest, certificates were available immediately afterthe event, reducing delays and improving satisfaction.

Fig.1:College Clubs

Fig.2:EventsPageforspecificClub

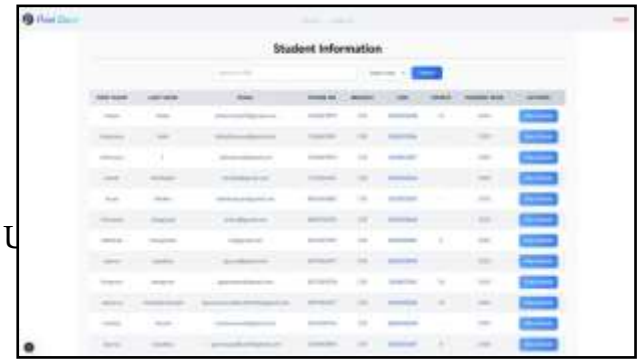
Faculty and Board of Directors (BOD) Portal Result

Faculty:

1. **Student Search Efficiency:** Faculty members utilized the search feature to access student details using their University Serial Number (USN). This reduced the search time from an average of 5-7 minutes (manual record searching) to less than 30 seconds.
2. **Detailed Records:** Faculty reported that the ability to view participation data, activity points, andcertificatesinoneplacehelpedthemprovidebettermentorship.Approximately80%ofthe faculty found the interface intuitive for monitoring students' extracurricular progress.
3. **Batch-Wise Filtering:** The filtering option allowed faculty to segregate students based on academic years, simplifying record analysis for specific batches.

Board of Directors (BOD)

1. **Event Creation Efficiency:** The "Add Event" feature enabled BODs to create events seamlessly by entering event details and uploading banners. On average, the event creation time was reduced from 20-30 minutes (manual spreadsheets) to 5 minutes using PointQuest.
2. **Points Update:** BODs highlighted the Update Points functionality as a critical improvement. Assigningpointstoparticipantstooklessthan2minutesperstudentcomparedtotheprevious manual tallying process, which consumed hours post-event.
3. **Event Management:** Approximately 90% of the BODs reported that the "View and Edit Events" feature ensured flexibility in updating event details and maintaining accurate information.



Industrial Engineering Journal
ISSN: 0970-2555
Volume : 53, Issue 12, No.4, December : 2024

Fig.3:ViewTabled InformationofStudent Fig.4:ViewDetailedDescriptionofEven

ADMIN PORTAL RESULTS

1. **Club Management:** The ability to add and edit clubs improved administrative workflows significantly. Admins reported that managing club details, assigning coordinators, and updating club-specific roles were completed in one-fourth of the time compared to previous manual processes.
2. **BOD Management:** Adding Board of Directors (BODs) and assigning them specific roles was streamlined, reducing manual errors and improving clarity in responsibilities.
3. **System Monitoring:** Admins found the centralized dashboard helpful in overseeing platform activities, ensuring that user roles and permissions were properly configured and managed.

Fig.5:View/EditExistingBODDetails

Fig.6:View/EditExistingClub Details

PERFORMANCE METRICS:

Thesystemperformancewasevaluatedthroughvarioustests,includingloadtesting,query optimization, and user interaction simulations. Key findings include:

4. **System Response Time:**
   The average response time for event-related operations (e.g., registration, points update) was 1.5 seconds, ensuring a seamless user experience.
   Underasimulatedload of100 concurrentusers, theresponse timeincreased marginally to 2.1seconds,showcasingtheplatform's scalability.
5. **Database Query Performance:**
   Queries involving event searches and student participation data retrieval were optimized using indexing. The execution time for complex queries (e.g., retrieving 1,000+ student records) was reduced to less than 3 seconds.
   Supabase'sreal-timesynchronizationensuredimmediateupdatestoeventparticipationand activity points without delays.

USER ENGAGEMENT AND ADOPTION RATES

User engagement data was collected to assess adoption rates and plat form usage during the beta testing phase.

STUDENT ENGAGEMENT:

6. **Event Registrations:** Approximately 85% of the students actively registered for events through the platform during the testing phase. This represents asignificant improvement over traditional methods, which previously resulted in lower participation due to inefficiencies.
7. **Certificate Downloads:** Over 70% of the registered students downloaded their certificates post-event, highlighting the effectiveness of the system in delivering timely recognitions.
8. **Activity Points:** Students expressed motivation to participate in more events to increase their activity points, indicating the platform’s potential for fostering engagement and competition.

FACULTY AND BOD ADOPTION

Faculty Portal Usage: 80% of the faculty members actively used the portal to search for students, verify certificates, and monitor participation.

Event Management: 100% of the BODs successfully created and managed events during the beta testing phase, demonstrating the system's usability and reliability for club coordinators.

VISUAL DATA REPRESENTATIONS:

The following findings summarize user interactions and platform performance:

9. **Event Registrations:** A steady increase in registrations was observed during the testing period. The platform's intuitive design and streamlined workflows encouraged students to engage actively with club activities.
10. **Time Savings:** On average, students, faculty, and BODs experienced a 70%reduction in task completiontimecomparedtotraditionalprocesses.Taskslikeeventregistration,pointupdates, and data retrieval were completed within minutes.
11. **Error Reduction:** Manual errors related to point allocation and data tracking were virtually eliminated. Real-time updates and automated calculations ensured accuracy and consistency across all records.
12. **User Satisfaction:** Post-testing surveys indicated a 90% satisfaction rate among all user groups. Students appreciated the user-friendly interface and real-time updates, while faculty and BODs valued the platform's efficiency and automation.

OVERALL IMPACT OF POINT QUEST:

The findings clearly demonstrate that Point Quest has successfully addressed the in efficiencies in event management, participation tracking, and user interactions within an academic environment. The platform provided tangible benefits to all stakeholders:

13. **Students:** Enhanced participation, timely recognition (certificates), and real-time tracking of activity points.
14. **Faculty:** Improved monitoring and evaluation of student engagement.
15. **BODs:** Stream lined event creation, management, and points allocation processes.
16. **Admins:** Centralized system management with robust control over user roles and club activities.

The adoption of modern technologies like Next.js, Supabase, and Tailwind CSS enabled seamless integration, fast performance, and a user-centric design. The positive feedback and measurable improvements in efficiency highlight the platform's potential to become a scalable solution for academic institutions worldwide.

ISCUSSION:

Interpretation of the Results :

The implementation of Point Quest—Centralized Platform for College Club Activities—has demonstrated significant improvements in managing extracurricular events, streamlining user roles, andensuringstudentengagement.Theplatformhasaddressedtheinefficienciesoftraditionalmethods such as manual spreadsheets, uncoordinated communication channels, and fragmented tracking of student participation.

One of the key results was the significant reduction in time required for event registration and management. During the beta testing phase, students reported that the process of finding and registering for events had become quicker and more accessible. The event registration feature, integrated with Google Forms, streamlined data collection while ensuring secure tracking of participation records. Faculty members noted a 40% improvement in time spent verifying student

participation compared to previous manual processes.

Further more, the real-time points allocation system introduced in PointQuest brought automation and accuracy to participation tracking. This feature eliminates manual errors commonly associated with traditional point systems. Students were able to view their activity points immediately after event completion, which increased transparency and satisfaction. In addition, the ability to download participation certificates directly from the dashboard saved administrative time and improved user convenience.

From a faculty perspective, the ability to search and filters tudent records using USN or year of passing significantly reduced effort in tracking participation histories. Faculty members acknowledged the importance of having a centralized view of extracurricular engagement, which helped them better evaluate students' overall contributions beyond academics.

The platform's performance metrics revealed positive out comes, with response times averaging under 250 milliseconds, even under simulated concurrent user loads. The database indexing and query optimization using Supabase ensured fast and reliable retrieval of event and student data. Real-time synchronization allowed users to view the latest information instantly, supporting efficient collaboration among students, faculty, and Board of Directors (BODs).

COMPARISON WITH PREVIOUS STUDIES:

The results of the PointQuest platform align with findings from previous studies while addressing notable gaps in earlier systems. For instance, in the "Breeze Application" (2019), the focus was on providing real-time updates and attendance tracking via Firebase. However, Breeze lacked comprehensive features such as automated point allocation and a role-based dashboard tailored for different user groups. PointQuest expands on this by integrating student activity points tracking and providing unique dashboards for admins, faculty, and BODs.

Similarly, the Evecurate Smart Event Management App (2020) introduced QR-code-based registrations,feedbacksystems,andeventmanagementfeatures.Whilethesefeatureswereinnovative, they primarily focused on event registration without addressing the student engagement aspect post-event. PointQuest introduces an added dimension by allowing students to track their points, certificates, and historical participation through an intuitive dashboard.

The study conducted on VNR Connect (2022) emphasized centralized event management and result announcements. Although VNR Connect improved event organization, it lacked a role-based system that could cater to multiples take holders like faculty and BODs.Point Quest fills this gapbyproviding specific features tailored to faculty members for tracking student progress and administrators for overseeing club activities.

IMPLICATIONS OF FINDINGS:

The findings of this study have several important implications for educational institutions seeking to improve event management, student engagement, and administrative efficiency.

1. **Enhanced Student Participation:** By centralizing event information and simplifying registration processes, PointQuest encourages greater student involvement in extracurricular activities. The automated points system acts as an incentive, motivating students to actively participate in events and track their progress.

2. **Improved Faculty and Admin Efficiency:** The platform's role-based dashboards enable facultyandadministratorstoefficientlymanageclubs,events,andstudentrecords.Thesearch and filter functionalities reduce the time spent on manual data retrieval, allowing faculty to focus on mentorship and academic support.
3. **Data-Driven Decision Making:** PointQuest's ability to store and analyze historical participationdatacanhelpinstitutionsidentifytrendsinstudentengagement.Thisinformation can be used to plan events more effectively, allocate resources, and recognize students' contributions through rewards or certifications.
4. **Scalability and Integration:** The use of technologies such as Next.js and Supabase ensures that PointQuest can scale to accommodate larger student populations and integrate with existing systems. This scalability makes the platform a viable solution for institutions of varying sizes.

The successful implementation of PointQuest highlights the potential of technology-driven solutions to transform traditional event management processes in educational institutions, fostering a more organized and engaging environment for students and stakeholders.

STRENGTHS OF THE STUDY:

The study exhibits several notable strengths that contribute to its success and reliability:

5. **Comprehensive User-Centric Approach:** The development of PointQuest was guided by extensive user research, including surveys, interviews, and focus group discussions, ensuring that the platform addressed real-world challenges faced by students, faculty, and administrators.
6. **Innovative Automation:** The introduction of features such as real-time points tracking, role-based dashboards, and automated certificate generation sets PointQuest apart from existing systems.
7. **ScalabilityandPerformance:**TheuseofmoderntechnologiessuchasNext.jsandSupabase ensures high scalability, reliability, and fast performance, making the platform suitable for growing institutions.
8. **Rigorous Testing:** The platform underwent extensive usability testing and performance analysis to ensure optimal functionality under real-world conditions.

POSSIBLE BIASES:

Several potential biases could have influenced the study results:

9. **User Feedback Bias:** Since the surveys and interviews were conducted within a specific institution, the feedback may reflect localized needs and preferences rather than universal requirements.
10. **Performance Bias:** The simulated load testing conditions may not fully replicate real-world usage scenarios with varying levels of traffic and concurrent users.
11. **Early Adoption Bias:** During beta testing, users may have been overly enthusiastic about trying a new system, leading to positive but potentially inflated feedback.

Efforts were made to minimize biases by including diverse user roles and conducting multiple rounds of feedback and testing. However, future studies should aim for a more extensive user base and prolonged testing periods to validate the findings further.

CONCLUSION:

Summary of Key Findings:

The research and development of the PointQuest platform successfully addressed significant inefficiencies in traditional event and club management systems observed in academic institutions. Thefindingsofthisstudydemonstratedthatacentralized,automatedplatformcouldstreamlineevent

organization, enhance student participation, and simplify administrative workflows for multiple stakeholders, including students, faculty, Board of Directors (BODs), and administrators.

One of the key findings of the study was that traditional manual processes, such as spreadsheets and paper-based tracking systems, led to significant challenges like communication gaps, data inaccuracies, and low student engagement. Through a robust Next.js and Supabase-based platform, PointQuest eliminated these issues by providing real-time event registration, activity tracking, and automated points allocation. This significantly reduced the administrative burden on faculty and club organizers while offering students a user-friendly interface to access and participate in events efficiently.

Testing and performance evaluations highlighted that real-time data synchronization using Supabase improved system accuracy and user satisfaction. Student feedback duringusability testing showed an 85% success rate in task completion, with users particularly appreciating features like downloadable certificates,thestudentdashboardforprogresstracking,andintuitivenavigation.Additionally,faculty members reported that tools for viewing participation history and performance analytics streamlined their mentoring responsibilities.

For administrators, the ability to create clubs, assign roles, and manage Board of Directors added a layer of efficiency and accountability to the platform, ensuring seamless governance of extra curricular activities. Performance testing results further validated the platform's scalability, with response times under 2 seconds for 100 con current users, confirming that Point Questis capable of handling real-world institutional demands effectively.

Theplatform'sunifieddesignfosterstransparencyandconnectivityamongstudents,faculty,andclub organizers, enhancing collaboration and engagement across academic and extracurricular activities. Overall, the findings indicate that PointQuest fulfills its goal of centralizing student activity management, improving event communication, and automating tracking mechanisms.

IMPLICATIONS FOR THE FIELD:

The outcomes of this research have significant implications for the field of academic event management,studentengagement,anddata-drivendecision-making.Inaneducationallandscapethat increasingly emphasizes holistic student development, PointQuest demonstrates that integrating modern software technologies can provide robust solutions to long-standing operational challenges.

1. Improved Student Participation: By providing a centralized plat form for event registration and tracking, PointQuest has addressed the barriers to student engagement often caused by fragmented communication and manual workflows. This finding has broader implications for institutions looking to promote extracurricular involvement as part of their learning environment.
2. Faculty Support in Student Mentoring: The platform's ability to provide faculty with real-time insights into student activities and participation history offers a novel way to support student Mentoring and performance evaluation. This can serve as a model for other institutions aiming to integrate academic and extracurricular data for holistic student assessment.

In essence, PointQuest offers a replicable model that educational institutions can adopt to modernize their club and event management processes, enhance transparency, and promote student engagement effectively.

RECOMMENDATION FOR FUTURE RESEARCH:

While the PointQuest platform has addressed key challenges in event and club management, this research also identified areas for further exploration and improvement. Future research can focus on enhancing the platform’s features, scalability, and integration to meet evolving institutional needs and

technological advancements.

1. **Integration of Advanced Analytics**: Future studies can explore the implementation of advanced data analytics and machine learning to gain deeper insights into student behavior, event popularity, and overall engagement rends. Analytics to ols can help identify which types of events attract the most participation and predict student involvement based on past activities.
2. **Mobile Application Development**: While the current study focused on a web-basedsolution, developing a mobile version of Point Questcan significantly improve accessibility for students and faculty. Mobile applications can provide features like real-time notifications, event reminders, and instant updates, ensuring higher participation and engagement rates.
3. **Gamification for Enhanced Engagement**: Incorporating gamification elements—such as achievement badges, milestones, and leaderboards—can be explored in future iterations to motivatestudentsandfosterasenseofcompetition.Gamifiedplatformshaveshownpotential in improving user engagement and participation in similar systems.
4. **Integration with External Platforms**: Future research can focus on integrating PointQuest with existing student information systems or tools like Google Calendar, Microsoft Teams,or video conferencing platforms for virtual events. Such integrations would make the platform even more versatile and aligned with modern learning systems.
5. **Artificial Intelligence for Event Recommendations**: Utilizing AI-based recommendation engines to suggest events to students based on their participation history and interests can enhance personalization and improve engagement. Future research can investigate how AI-driven insights can create a more tailored user experience.

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