UTM
UNIVERSITI TEKNOLOGI MALAYSIA

TECHNOLOGY AND INFORMATION SYSTEM

SECTION 6 GROUP 4

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OVERVIEW OF NALI EVENT

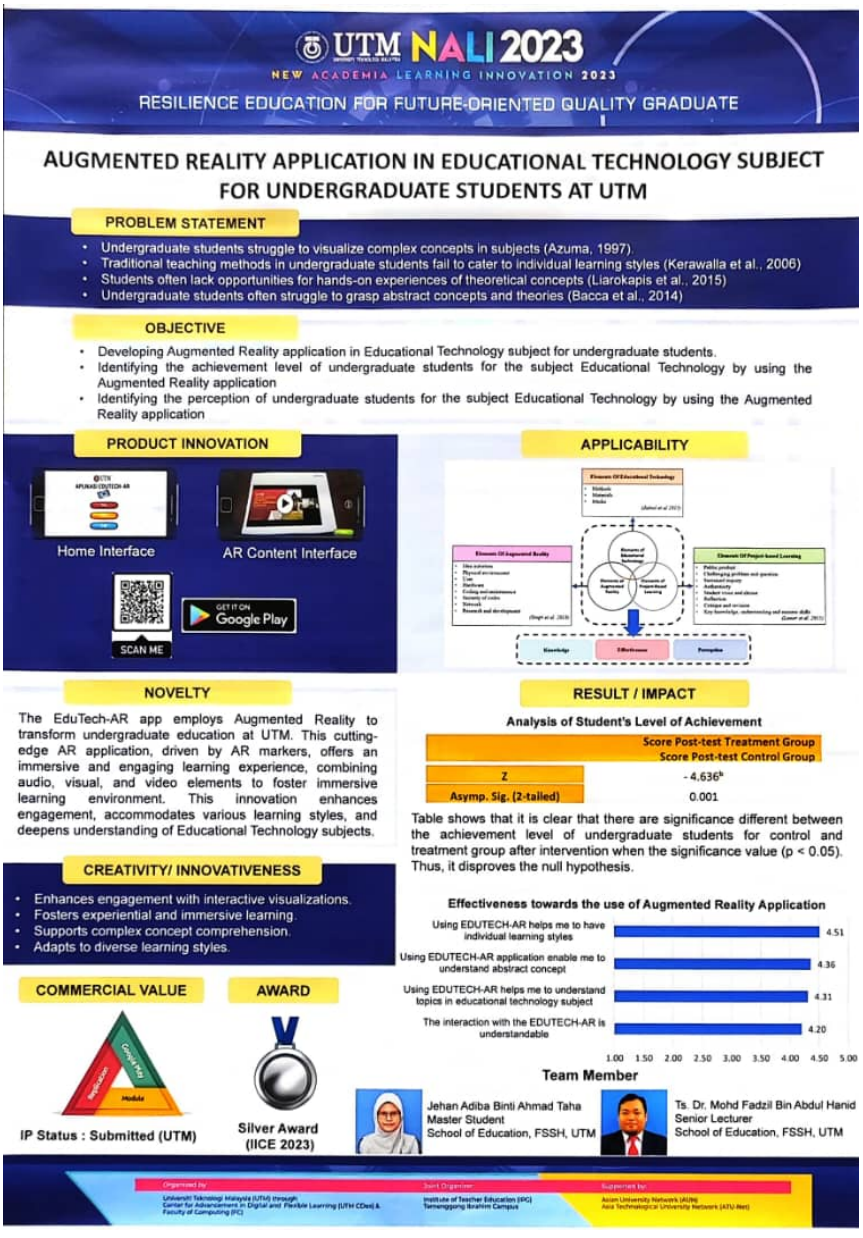
On November 5, 2023, we were tasked with preparing a report reviewing posters showcased at NALI 2023, organized by UTM and spanning two days on November 7 and 8. The event's primary objective was to promote innovative teaching and learning practices in education.

Our attendance on November 8 allowed us to engage with presenters from diverse backgrounds and countries, gaining valuable insights into education, particularly in the realm of ICT—an area specified by our lecturer for our assignment on ICT in teaching and learning systems.

After carefully examining numerous posters, we identified five that closely aligned with our assignment's focus. Subsequently, we conducted interviews with the respective presenters, delving deeper into the realm of ICT in teaching and learning.

Here are the posters chosen by us:

1. The first poster is about augmented reality application in educational technology. After interviewing the presenter, we were able to know more about ICT in teaching and learning process. Their thoughtful ideals had benefited us a lot.



Reflection:
Upon reviewing the poster on the Augmented Reality Application in Educational Technology for undergraduate students at UTM, I am intrigued by the innovative approach to address common challenges in teaching complex subjects. The problem statement clearly identifies issues such as the struggle to visualize concepts, limitations in traditional teaching methods, and the lack of hands-on experiences for theoretical concepts. These challenges resonate with the broader issues faced in education, particularly in the field of Educational Technology.

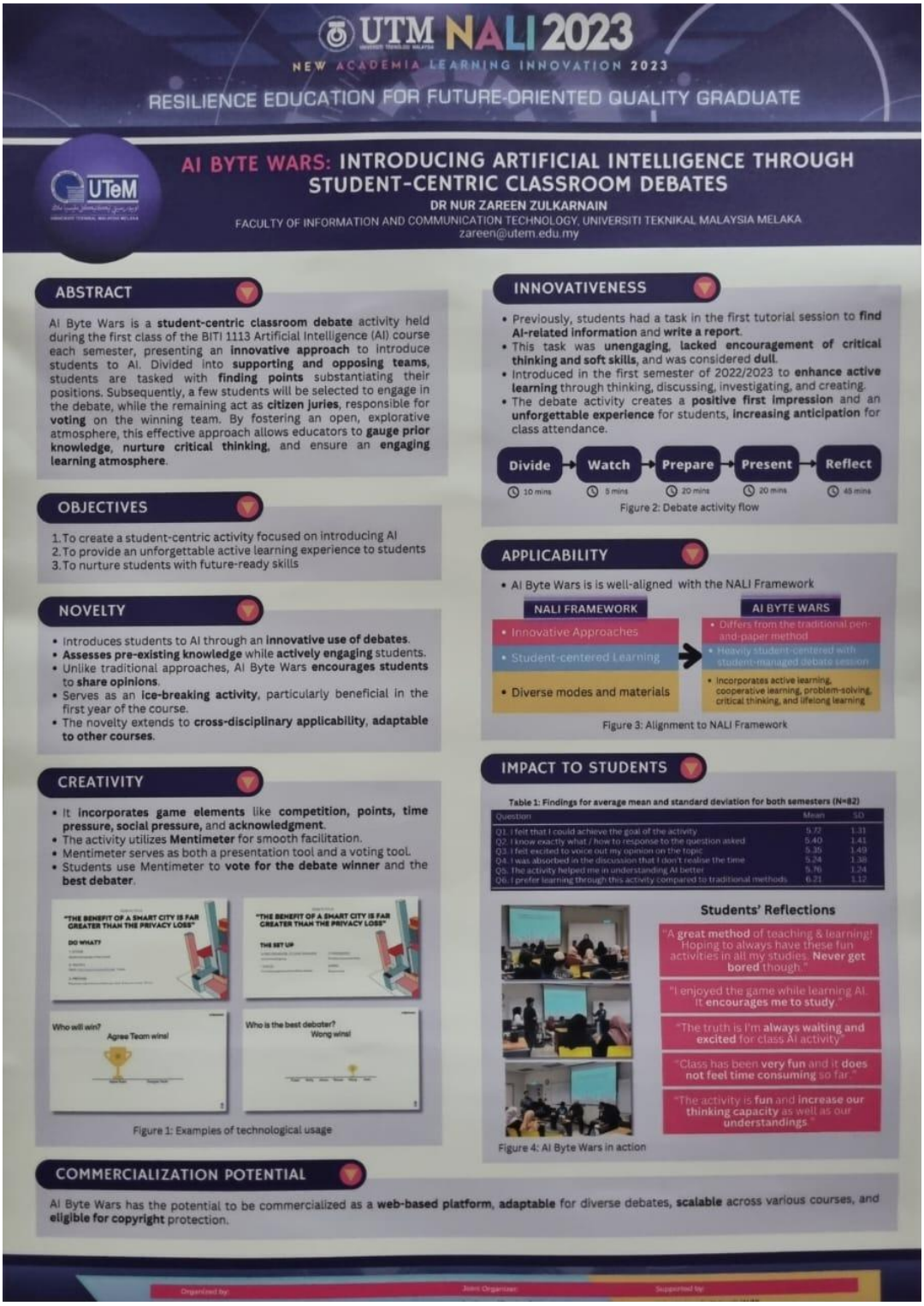
The objectives outlined in the poster, specifically the development of an Augmented Reality application and the assessment of its impact on students' achievement levels, demonstrate a commitment to enhancing the learning experience. The inclusion of elements such as the home interface and AR content interface indicates a thoughtful consideration of user experience, which is crucial for successful implementation.

The applicability section underscores the integration of educational technology, augmented reality, and project-based learning. This interdisciplinary approach is commendable as it not only leverages cutting-edge technology but also aligns with modern pedagogical principles. The novel EduTech-AR app, driven by AR markers, promises an immersive and engaging learning environment that caters to diverse learning styles, providing a solution to the identified problems.

The anticipated impact, as indicated by the results section, suggests a significant difference in the achievement levels of students who have used the AR application compared to those who have not. The rejection of the null hypothesis implies that the Augmented Reality intervention has a positive effect on the understanding of Educational Technology subjects among undergraduate students.

In the broader context of ICT in education, this poster underscores the transformative potential of technology to address long standing issues in teaching and learning. The EduTech-AR app represents a forward-looking approach that embraces the benefits of augmented reality to create a more dynamic and effective educational experience. As we move further into the digital age, such initiatives become increasingly relevant, showcasing the importance of adapting teaching methodologies to meet the evolving needs of students.

2. The second poster introduces Artificial Intelligence through the student-centric activity "Al Byte Wars." Engaging with the presenter and exploring the augmented reality applications in educational technology poster deepened our understanding of ICT's role in teaching and learning. The insights shared highlighted innovative ideals in integrating augmented reality into education, offering practical applications for both teachers and learners. The presenter's invaluable expertise provided a comprehensive perspective on technology's transformative potential in education, enriching our understanding of this dynamic landscape.

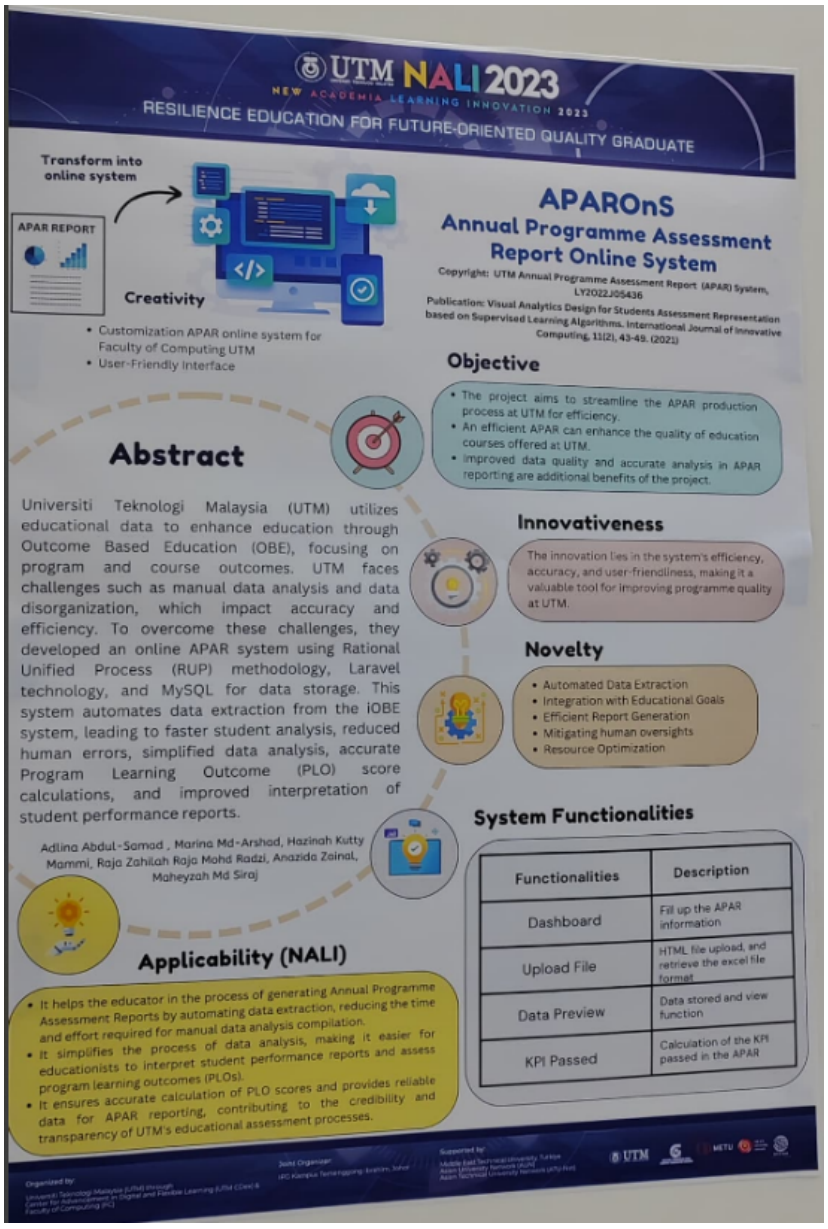


Reflection:
As I delve into the details of the Al Byte Wars poster, I can't help but be intrigued by the innovative approach it takes to introduce Artificial Intelligence. The student-centric nature of this classroom debate activity, held at the onset of the BITI 1113 course, immediately captures my attention. The division of students into supporting and opposing teams, tasked with substantiating their positions, is a testament to the dynamic and interactive learning experience envisioned. This strategy not only sets the stage for an engaging semester but also serves as an effective means of gauging students' existing knowledge and nurturing critical thinking skills from day one.

The stated objectives of the poster underscore a thoughtful design aimed at enhancing the learning journey. The commitment to creating a student-centric activity aligned with modern educational trends resonates with me as it addresses the call for more interactive and engaging methods in technical education. The emphasis on an unforgettable active learning experience suggests a dedication to making the acquisition of AI knowledge a memorable endeavor. Additionally, the goal to nurture future-ready skills, including critical thinking, positions Al Byte Wars as a pivotal component in students' broader skill development, preparing them for the demands of a rapidly evolving technological landscape.

The creativity and innovativeness of Al Byte Wars make it stand out as more than just a typical educational activity. The infusion of game elements, such as competition, time pressure, and acknowledgment, injects a sense of excitement and challenge into the learning process. The utilization of Mentimeter as both a presentation and voting tool demonstrates a seamless integration of technology, providing a glimpse into the forward-thinking nature of the initiative. This departure from traditional methods, as highlighted in the innovativeness section, speaks to a responsiveness to student engagement concerns and a commitment to continuously refining the learning process. Overall, Al Byte Wars appears to be a beacon of effective and inventive pedagogy, promising a dynamic and anticipatory learning experience.

3. The third poster centers on augmented reality's application in educational technology. Conversing with the presenter offered valuable insights into integrating Information and Communication Technology (ICT) in teaching and learning. Their thoughtful ideas greatly enhance our understanding of the subject, proving immensely beneficial.



In reviewing the abstract on the development of the online Annual Programme Assessment Report (APAR) system at Universiti Teknologi Malaysia (UTM), I am impressed by the strategic application of technology to streamline and enhance the educational assessment process. Challenges faced by UTM, such as manual data analysis and poor organization, are common issues among academic institutions globally. The project adopts the Rational Unified Process (RUP) methodology, Laravel technology, and MySQL data storage, reflecting a comprehensive systematic approach to address these issues.

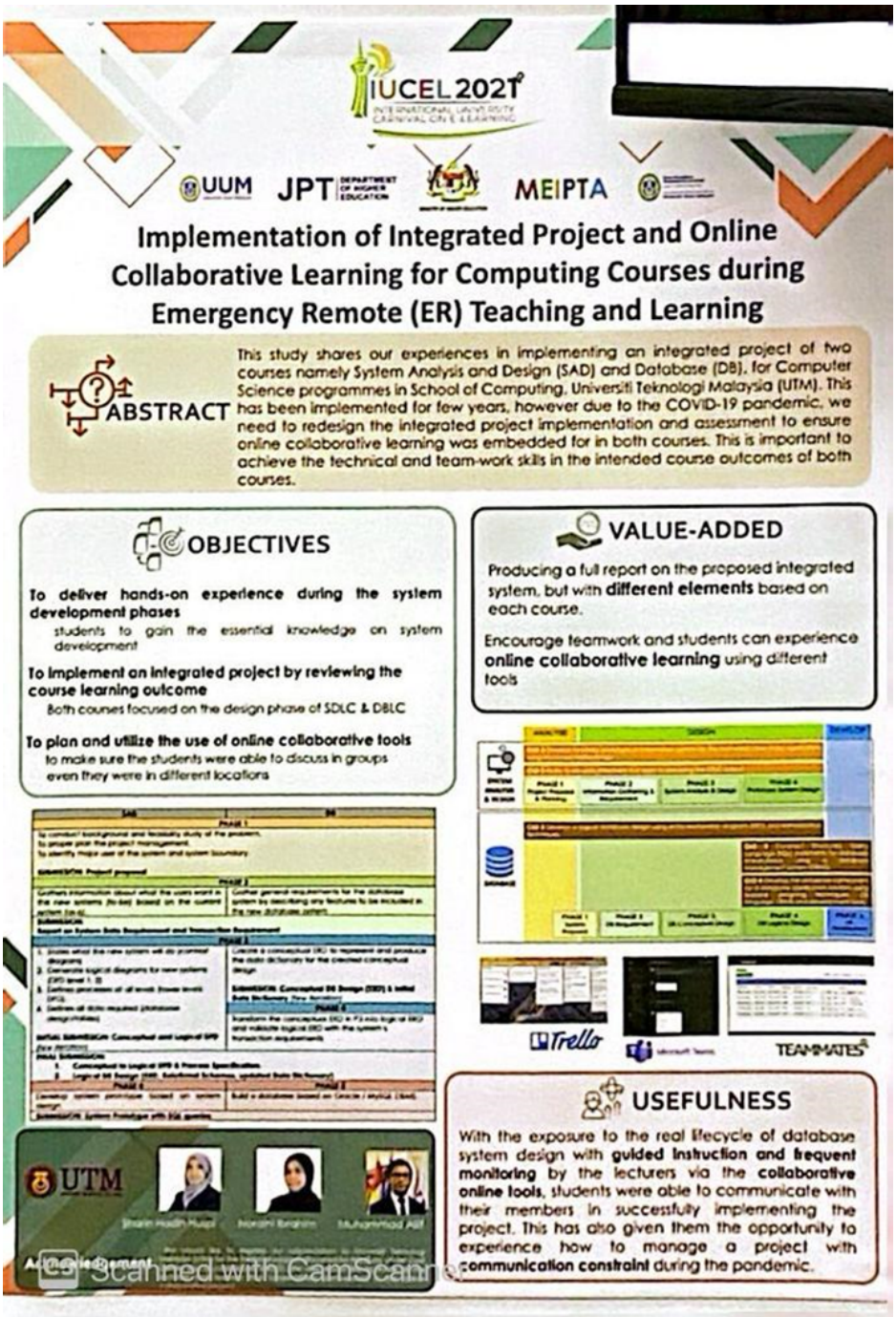
The outlined objectives in the abstract align with broader goals of improving educational quality, emphasizing the importance of efficiency in developing Annual Programme Assessment Reports (APARs). The emphasis on accurate calculation of Program Learning Outcomes (PLO) scores and providing reliable data for reports contributes to enhancing the credibility and transparency of UTM's educational assessment practices.

The innovation of this project is noteworthy, particularly in the automation of data extraction, integration with educational objectives, and overall efficiency of report generation. The innovation lies in mitigating human errors through a systematic approach adopted during the development process. This not only reduces the possibility of errors but also optimizes resource utilization, demonstrating a forward-looking perspective in dealing with challenges associated with manual data handling.

Based on the described system functionalities, including a user-friendly APAR information input dashboard, file upload functionality, data preview feature, and Key Performance Indicator (KPI) calculations, these features collectively form a seamless and effective system, addressing the complexity of educational data management.

In summary, the abstract reflects a well-considered initiative by UTM to leverage technology for improving educational processes. The project focuses on efficiency, accuracy, and user-friendliness, positioning it as a valuable tool for educators and administrators, ultimately contributing to the improvement of UTM's course quality. Given that educational institutions worldwide face similar challenges, insights from this project may serve as a model for other institutions seeking to optimize their assessment and reporting processes

4. The fourth booth that we visited was about Implementation of Integrated Project and Online Collaborative Learning for Computing Courses during Emergency Remote (ER) Teaching and Learning.



Reflection:

The described activities, including the integration of System Analysis and Design (SAD) and Database (DB) courses, implementation of an integrated project, and adaptation to online collaborative learning, appear to offer several benefits to students which is improving

teamwork skills. The collaborative nature of the project, especially in an online environment, helps students develop teamwork and communication skills. These skills are crucial in the workplace, where projects often involve collaboration among team members located in different places. Other than that, students are being exposed to Real World Application. The integrated project allows students to apply theoretical concepts from both courses to a real-world scenario. This practical application can deepen their understanding of system analysis, design, and database concepts.

These activities for sure have the potential to positively impact the outcomes of the System Analysis and Design (SAD) and Database (DB) courses in several ways. The first is the Development of Practical Skills in students. Through the integrated project, students have the opportunity to develop practical skills related to system development, database design, and collaborative teamwork. These skills are valuable assets in professional settings, where practical application is often as important as theoretical knowledge.

Students engaging in the described integrated project with an emphasis on online collaborative learning, are likely to gain several impactful learning experiences which is the preparation for professional environments. The combination of technical skills, teamwork, communication, adaptability, and project management learned through the integrated project prepares students for the demands of professional environments. They will be better equipped to contribute meaningfully to projects and teams in their future careers.

These activities with an emphasis on hands-on experience and online collaborative learning, have the potential to spark excitement and interest among students. It is because of the comprehensive exposure to the life cycle. Experiencing the full lifecycle of database system design provides students with a broader perspective on the entire process. This exposure can be exciting as students gain a comprehensive understanding of how different phases interconnect.

The NALI 2023 events surely provide many useful information to students that might helps them in a better teaching and learning way. Visiting events like NALI 2023 may expose students to industry experts, current trends, and the latest advancements in the field. This exposure can provide valuable insights beyond the course material, offering a broader perspective on relevant topics. Other than that, exposure to industry events and interactions with professionals can be motivating for students. Seeing the practical implications of their studies and understanding the potential impact of their future careers may inspire greater engagement with the course material.

5. The last poster introduces "Navigate X," an innovative maze game designed to meet diverse learning needs with a focus on students with attention deficit hyperactivity disorder (ADHD).

Reflection:
The Navigate X maze game is especially noteworthy for its ability to help pupils with attention deficit hyperactivity disorder (ADHD) among the many unique teaching tools created to meet the various learning demands of children . The dual-sided form of the game, which serves both peers and kids with special needs, demonstrates the inventiveness of the design. The innovation's distinctiveness resides in its conversion into an interactive instructional environment that bridges conventional and new paradigms.

One example of the design's inventiveness is the two-sided maze, which offers different degrees of difficulty. The game acknowledges diversity in learning methods and emphasizes inclusion by designing one side specifically for kids with ADHD and the other for normal

students. This adaption contributes to the achievement of the Sustainable Development Goals (SDGs) and fits in perfectly with the Universal Design for Learning (UDL) principles.

By including interactive features like ping pong ball balance and technologically aided language development, Navigate X transcends the traditional maze game. This dynamic method develops critical thinking, cooperation, and flexibility among students. In addition to being an educational tool, the maze game encourages virtues like ethics and resilience.
It has a significant positive effect on kids' learning, dismantling obstacles and fostering inclusion. Students learn alongside their peers through pair work activities, promoting ethical behavior and collaborative skills despite differences in learning profiles. This method of cooperative learning develops law-abiding, compassionate individuals who are able to make constructive contributions to their communities.

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The maze game has great commercialization potential since it may be used in a variety of educational contexts including elementary schools and specialized learning centers. An A' in the Inclusive Education course and a presentation at the New Pedagogies for Deep Learning (NPDL) Showcase are just two examples of the accolades the invention has garnered.

To sum up, Navigate X is a revolutionary teaching tool that encourages inclusivity, teamwork, and positive values in addition to addressing the difficulties faced by students with ADHD. Its unique features and imaginative design make it an invaluable addition to a variety of learning environments.

Interview video : https://youtu.be/Nrk2ljgYRW0?feature=shared

Conclusion:
In conclusion, the exploration of posters at NALI 2023 has been a rich and enlightening experience, unveiling a tapestry of innovative approaches in education. Each poster presented a unique perspective, showcasing the diverse ways technology and pedagogy intersect to enhance teaching and learning. From augmented reality applications and AI-driven classroom debates to streamlined assessment systems and inclusive maze games, these initiatives exemplify the evolving landscape of education.

The depth of insights gained from engaging with presenters and delving into the nuances of each poster has broadened our understanding of Information and Communication Technology's role in education. The showcased projects reflect a commitment to addressing challenges, fostering critical thinking, and creating engaging learning environments. The integration of technology not only amplifies the educational experience but also prepares students for the demands of the future.

Furthermore, the adaptability and applicability of these initiatives across diverse educational contexts underline the universal impact of innovative teaching practices. As we navigate the

ever-evolving landscape of education, these posters serve as beacons of inspiration, offering glimpses into the transformative possibilities that arise when technology and pedagogy converge. NALI 2023 has provided a platform for educators and learners alike to share and celebrate advancements, ultimately contributing to the continual evolution of teaching and learning practices.