MINDLOOPS MAKER SPACE

EVENT REPORT

24 NOVEMBER 2024

DEWAN JUBLI INTAN, JOHOR BAHRU

ORGANISER

EDESS
Education Development and Solutions Specialist Sdn. Bhd.

MiNdLoops®

COLLABORATOR

KEMENTERIAN PENDIDIKAN
JABATAN PENDIDIKAN NEGERI JOHOR

SPONSORS

YAYASAN JCORP

1.0 Event Summary

The MindLoops Maker Space Event 2024 was a comprehensive, multi-stage program that spanned almost four (4) months, to empower primary school students in Johor with essential STEM (Science, Technology, Engineering, and Mathematics) education, entrepreneurial skills, and SDG sustainability principles through a hands-on learning experience. The event, spearheaded by EDESS and held in collaboration with Jabatan Pendidikan Negeri Johor (JPNJ), was generously sponsored by Yayasan Raja Zarith Sofiah and Yayasan JCorp.

The event targeted primary school students aged 10–12 across Johor and culminated in an exciting competition where students showcased innovative solutions to real-world challenges. By aligning activities with Sustainable Development Goals (SDGs), the program cultivated creativity, critical thinking, and collaboration, setting the stage for Malaysia's future innovators and problem solvers.

The phased approach allowed participants to gradually develop their projects, from ideation to model development, supported by structured support and mentoring. The program reached its peak on 24 November 2024, when selected teams presented their projects to a panel of jurors and vied for prestigious awards.

2.0 Objectives

- **Inspire Innovation:** Encourage students to explore STEM and entrepreneurship through hands-on activities.
- **Develop Skills:** Equip participants with 21st-century skills such as problem-solving, teamwork, and digital literacy.
- **Foster Sustainability:** Promote SDG principles and innovative thinking to address environmental and societal challenges.

3.0 Event Themes

- **Eco-Friendly Innovations (SDG 9 & SDG 12):** Projects focusing on sustainability, waste reduction, and resource efficiency.
- **Healthy Living Solutions (SDG 3):** Innovations to improve health and well-being in communities.
- **Community Impact Projects (SDG 11):** Practical solutions to address urban and rural challenges effectively.

4.0 Program Journey

4.1 Phase 1: Launch and Briefing (12 August – 9 September 2024)

Duration: 28 Days

- The program began with briefing session attended by 30 schools across Johor, where the objectives, themes, and guidelines were explained.
- Teams were introduced to the themes of eco-friendly innovations, healthy living solutions, and community impact projects.
- Participants received resources and guidance to start brainstorming their project ideas.

4.2 Phase 2: Development (10 September to 3 November 2024)

Duration: 64 Days

- Active support focused on:

STEM Fundamentals	:	Applying theoretical knowledge to practical challenges.
Business Model Canvas (BMC)	:	Structuring projects with entrepreneurial principles.
Model Development	:	Using sustainable materials to create tangible models.

- Model Development: Using sustainable materials to create tangible models.
- Teams received personalized mentoring sessions and online support to refine their ideas and enhance their presentations.

4.3 Phase 3: 1st Evaluation and Team Selection (5 November 2024)

Duration: 1 Day

- 30 Schools registered for the event.
- 25 schools applied, and 10 schools were selected based on criteria such as creativity, feasibility, and alignment with the program's goals.
- Selected 13 teams comprised four students and a teacher advisor across 10 schools.

4.4 Phase 4: Event Day (24 November 2024)

Duration: 1 Day

The final competition included:

- **Model Exhibition** : Teams displayed their models and demonstrated how they function.
- **Pitch Presentations** : Students presented their projects using the BMC framework to highlight innovation and practicality.
- **Evaluation** : Projects were assessed based on innovation, practicality, and presentation quality using a structured rubric.
- **Awards Ceremony** : Winners were recognized in categories like innovation, entrepreneurship, and audience appeal.

5.0 Guests

5.1 VIP

Table 1 lists distinguished guests from various organizations, each contributing their expertise to education and development initiatives in Johor. The attendees represent a diverse range of roles, including directors, senior managers, and education officers from government bodies like the Johor State Education Department (JPNJ), as well as key representatives from organizations like, Angkasa, Yayasan Raja Zarith Sofiah, Yayasan JCORP,and Petrosains. Their presence highlights a collaborative approach to enhancing educational and vocational opportunities in the region.

Table 1: VIP Guest List

GUEST NAME	ORGANIZATION
Ybhg Tuan Haji Mohd Hanafi Bin Samad	Pengarah Jabatan Pendidikan Negeri Johor (JPNJ)
Encik Mahfudz Bin Miskam	Ketua Penolong Pengarah Kanan TVET Sektor Pembelajaran Jabatan Pendidikan Negeri Johor (JPNJ)
Puan Norazura Azreen Binti Omar	Penolong Pengarah TVET Sektor Pembelajaran Jabatan Pendidikan Negeri Johor (JPNJ)
Encik Mohd Nasrudin Bin Haji Hashim	Penolong Pengarah Unit Prasekolah dan Rendah SPS Jabatan Pendidikan Negri Johor (JPNJ)
Tuan Haji Basiron Bin Yusof	Pengerusi Persatuan Guru Besar Malaysia Cawangan Johor Bahru Jabatan Pendidikan Negri Johor (JPNJ)
Ybhg Tuan Haji Sazali Bin Abd Hamid	Pengerusi ANGKASA Negeri Johor
Encik Mohd Safuan Fadzli Bin Mohsin Fadzli	Senior Manager Programme & Special Tasks Yayasan Raja Zarith Sofiah
Encik Muhammad Munir Bin Mazlan	Pegawai Unit Pendidikan (Kemahiran) Yayasan JCORP
Puan Raja Damia Asilah Binti Raja Auria	Pengurus Pusat Satelit-Semenanjung Petrosains
PM Dr. Mahyuddin Bin Arsat	Timbalan Pengerusi Jabatan Timbalan Naib Canselor (Akademik dan Antarabangsa) Universiti Teknologi Malaysia (UTM)

5.2 PANELIST

Table 2 showcases the distinguished panelists who evaluated the STEM-focused projects and Business Model Canvas (BMC) presentations. The panel includes professionals from various esteemed organizations, including the Johor State Education Department (JPNJ), Universiti Teknologi Malaysia (UTM), and industry leaders such as Edess, Yayasan JCorp, and Petrosains. Their collective expertise in education, innovation, and STEM development ensures a comprehensive and insightful assessment of the participants' work.

Table 2: Panellist List

JUREE NAME	ORGANIZATION
Puan Shamshah Baharani Binti Hussein	PPD Kota Tinggi Jabatan Pendidikan Negri Johor (JPNJ)
Puan Sureana Binti Masdar	PPD Pontian Jabatan Pendidikan Negri Johor (JPNJ)
Encik Amine Abdelhedi	Edess Education Development and Solutions Specialist Sdn Bhd (EDESS)
Prof. Madya Dr. Mahyuddin Bin Arsat	Universiti Teknologi Malaysia (UTM)
Encik Muhammad Munir Bin Mazlan	Yayasan JCorp
Puan Raja Damia Asilah Binti Raja Auria	Petrosains

5.3 PARTICIPANTS

The event saw enthusiastic participation from both students and teachers across various schools. The attendees included 68 participants who actively engaged in the sessions, contributing to the overall success of the event. Detailed lists of the participating students and teachers are provided in the Annex 1 for reference.

6.0 EVALUATION AND AWARDS

6.1 EVALUATION CRITERIA

The evaluation criteria aim to holistically assess participants' ability to apply entrepreneurial and innovative thinking in both presentations, ensuring alignment with STEM, TVET, and SDG objectives. The First Presentation rubric focuses on the clarity, organization, and strategic articulation of a Business Model Canvas (BMC), emphasizing entrepreneurial mindset and effective communication. The Second Presentation rubric evaluates the design and presentation of an innovative model, prioritizing creativity, functionality, sustainability, and presentation skills. Both rubrics, detailed in Annex 2, promote a balance between conceptual depth, practical application, and engaging delivery.

6.1.1 FIRST PRESENTATION RUBRIC: BUSINESS MODEL CANVAS (BMC)

Table 3 explains how rubric evaluates participants' ability to develop and present a comprehensive Business Model Canvas (BMC). It focuses on fostering entrepreneurial thinking, ensuring clear explanation and organization of BMC elements, aligning with STEM/TVET/SDG goals, and delivering a compelling presentation. The criteria emphasize a balance between strategic thinking and communication skills.

Table 3: First Presentation Evaluation Criteria

CRITERIA	DESCRIPTION	WEIGHTAGE
Entrepreneurial Mindset	Evaluation of innovation, financial strategy,and market potential.	20%
Explanation of Key Elements in BMC	Depth, detail, and relevance of elements like value propositions and customer segments.	20%
Structure and Arrangement of BMC	Completeness, clarity, and coherence in organizing BMC elements.	15%
Alignment with Project Goals (STEM, TVET, SDG)	Consistency and relevance to sustainability and educational principles.	20%
Communication and Presentation Clarity	Ability to effectively articulate and connect ideas with the audience.	25%

6.1.2 SECOND PRESENTATION: INNOVATIVE MODEL (STEM/TVET)

Table 4 details how the rubric assesses the creation and presentation of an innovative model within STEM/TVET domains. It highlights the importance of clear model structure, innovation, practicality, eco-friendly material usage, alignment with project goals, and effective presentation skills. The evaluation promotes creativity and real-world applicability in model design and communication.

Table 4: Second Presentation Evaluation Criteria

CRITERIA	DESCRIPTION	WEIGHTAGE
Model Structure and Components	Clarity and completeness in describing the model's parts and overall structure.	20%
Innovation and Uniqueness	Novelty, creativity, and effective application of STEM/TVET principles.	25%
Functionality and Practicality	Feasibility, cost-efficiency, and adaptability of the model.	20%
Materials Used	Safety, quality, eco-friendliness, and creative usage.	10%
Alignment with Project Goals (STEM, TVET, SDG)	How well the model aligns with and fulfills the intended objectives.	15%
Presentation and Communication	Clarity, confidence, and engagement during delivery.	10%

6.2 AWARDS

- MindLoops Best Award: Awarded for overall excellence in innovation and execution, this accolade includes a trophy and a mock cheque for RM3000.
- MindLoops Innovator Award: This award recognizes groundbreaking ideas and includes a trophy along with a mock cheque for RM1500.
- MindLoops Entrepreneur Award: Emphasizing commercial viability and entrepreneurial effort, this award consists of a trophy and a mock cheque for RM1500.
- People's Choice Award: Reflecting community engagement, this award is determined by audience votes.
- Gold, Silver and Bronze Award: These awards recognize participants for their outstanding achievements, performance, leadership, and innovation.

7.0 MARKETING AND PROMOTION

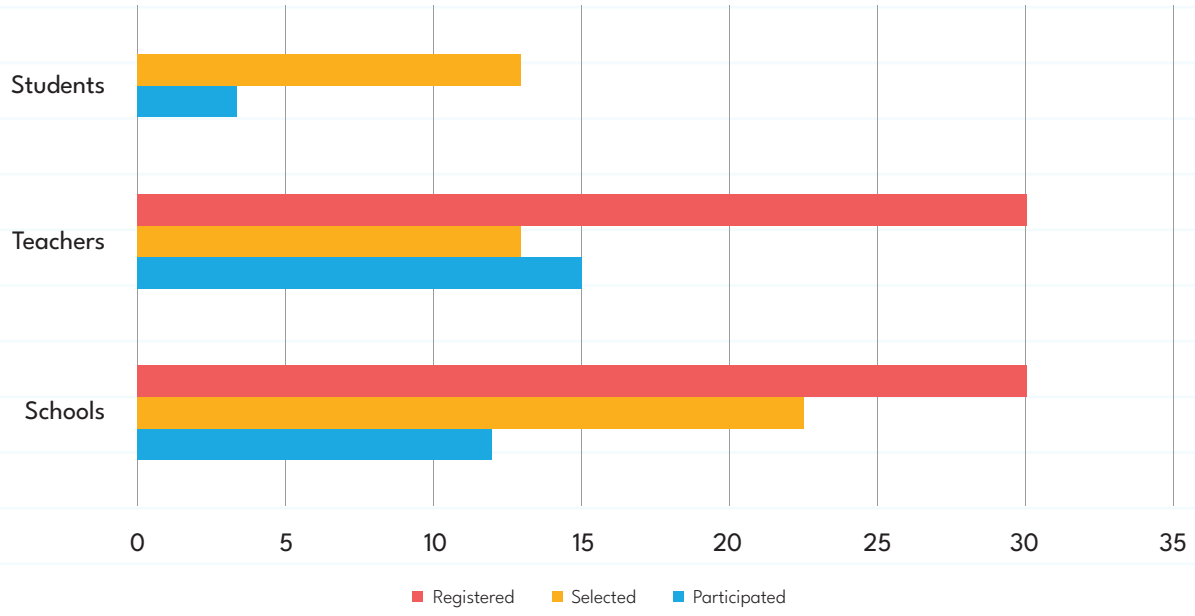
To ensure maximum reach for our education event, we implemented a comprehensive promotional strategy. We utilized social media platforms extensively, posting engaging content and tagging the Johor State Education Department (JPNJ) to leverage their wide audience. Additionally, we shared the event details with all District Education Offices (PPD) in Johor, ensuring that the information reached every corner of the state. We also utilized a dedicated Telegram channel to broadcast updates and invitations, making it easy for schools to stay informed. To further extend our reach, we sent direct invitations to a random selection of schools, ensuring that a diverse range of institutions were aware of the event. This multi-faceted approach helped us maximize the visibility and attendance of our education event.

8.0 DATA ANALYSIS

8.1 ATTENDANCE DATA

Chart 1 summarizes the attendance of stakeholders at the event, showing the progression from the initial registration of 30 schools to the selection of 23 schools after a preliminary evaluation. Ultimately, 13 schools attended the event, represented by 15 teachers and 54 students.

Chart 1: Attendane Data



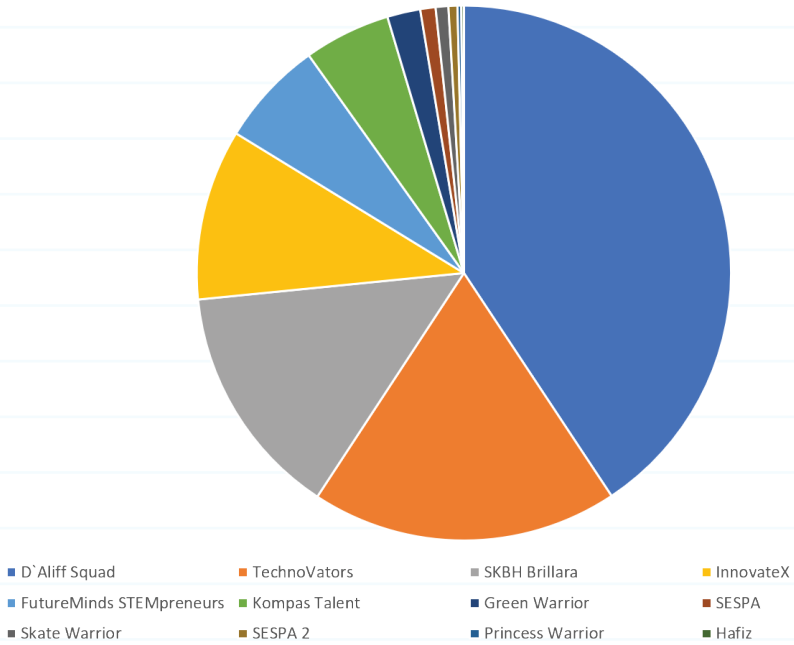
8.2 VOTING DATA

A total of 1,295 audience members participated in the online voting for the People's Choice Project, casting their votes based on group names and schools. Table 5 provides a detailed breakdown of the number of votes each school and group received, while Chart 2 visualizes the distribution of vote shares among the participating groups.

Table 5: Votes Breakdown

GROUP NAME	SCHOOL NAME	TOTAL VOTES
D`Aliff Squad	SK Taman Damansara Aliff	528
TechnoVators	SK LKTP Bukit Besar	241
SKBH Brillara	SK Bukit Hampar	184
InnovateX	SK Kahang	83
FutureMinds STEMpreneurs	SK Taman Molek	68
Kompas Talent	SK Kota Masai	26
Green Warrior	SK Seri Kampung Tengah	26
SESPA	SK Seri Separap	12
Skate Warrior	SK Seri Kampung Tengah	10
SESPA 2	SK Seri Separap	7
Princess Warrior	SK Seri Kampung Tengah	3
Hafiz	SK Taman Kota Kulai 2	2

Chart 2: Voting Data



8.3 BMC EVALUATION RESULTS

Table 6 presents the evaluation results for the Business Model Canvas (BMC) competition, showcasing the scores achieved by participating teams or schools. The results highlight the diversity and creativity of the participants, with scores reflecting their ability to develop and present comprehensive business models. Notable top performers include Hafiz with the highest score of 146 and TechnoVators and Princess Warrior, both scoring 131. These results demonstrate the participants' strong grasp of entrepreneurial and STEM principles, as well as their ability to align their projects with program goals.

The MindLoops Maker Space 2024 award allocation was based on recognizing each team's unique strengths. Hafiz, despite having the highest score (146), received the MindLoops Maker Space Best Award, the event's top honor, and was thus ineligible for other awards. TechnoVators (131) were awarded the Innovator Award for their creativity, while Princess Warrior (131) was not considered for the Entrepreneurship Award as their overall ranking was lower than InnovateX (127). Consequently, the Entrepreneurship Award was given to InnovateX, ensuring fair recognition for all eligible teams.

Table 6: BMC Evaluation Results

NO.	GROUP NAME	SCORES
1	Hafiz	146
2	TechnoVators	131
3	Princess Warrior	131
4	InnovateX	127
5	D'Alif Squad	125
6	SESPA	124
7	SKBH Brillara	124
8	SESPA 2	121
9	Skate Warrior	117
10	Kompas Talent	114
11	Green Warrior	110
12	FutureMinds STEMpreneurs	106
13	Brave Girls	99

8.4 INNOVATION EVALUATION RESULTS

Table 7 outlines the Innovation Evaluation Results, showcasing the scores for innovative projects presented by participating teams or schools. The results highlight the creativity, practicality, and alignment with STEM principles of each team's innovation. TechnoVators achieved the highest score of 75, followed by Kompas Talent with 72, reflecting their strong innovation and application of ideas. Other notable performers include Brave Girls and Hafiz, scoring 69 and 68, respectively. These scores demonstrate the participants' ability to design impactful and inventive solutions addressing real-world challenges.

Table 7: Innovation Evaluation Results

NO.	GROUP NAME	INNOVATION SCORES
1	Hafiz	75
2	TechnoVators	72
3	Princess Warrior	69
4	InnovateX	68
5	D'Alif Squad	65
6	SESPA	65
7	SKBH Brillara	63
8	SESPA 2	63
9	Skate Warrior	63
10	Kompas Talent	62
11	Green Warrior	59
12	FutureMinds STEMpreneurs	58
13	Brave Girls	57

8.5 OVERALL RESULTS (GOLD, SILVER, BRONZE)

Table 8 presents the overall results, combining scores from the Business Model Canvas (BMC) and Innovation evaluations to determine the total performance of each team. Hafiz achieved the highest overall score of 214, earning the MindLoops Best Award, while TechnoVators excelled with 206 points, securing the MindLoops Innovator Award.

Table 8: Overall Results

AWARD	NO.	GROUP NAME	BMC SCORE	INNOVATION SCORE	TOTAL SCORE	MINDLOOPS BEST AWARD	MINDLOOPS ENTREPRENEUR AWARD	MINDLOOPS INNOVATOR AWARD
Gold	1	Hafiz	146	68	214	1	1	4
Gold	2	TechnoVators	131	75	206	2	2	1
Gold	3	Princess Warrior	125	65	190	3	5	5
Gold	4	InnovateX	127	63	190	3	4	7
Silver	5	D'Alif Squad	131	57	188	5	2	13
Silver	6	SESPA	124	63	187	6	6	7
Silver	7	SKBH Brillara	114	72	186	7	10	2
Silver	8	SESPA 2	124	62	186	7	6	10
Silver	9	Skate Warrior	117	65	182	9	9	5
Bronze	10	Kompas Talent	121	58	179	10	8	12
Bronze	11	Green Warrior	110	63	173	11	11	7
Bronze	12	Brave Girls	99	69	168	12	13	3
Bronze	13	FutureMinds STEMpreneurs	106	59	165	13	12	11

MindLoops Maker Space
Best Award

MindLoops Maker Space
Entrepreneur Award

MindLoops Maker Space
Innovator Award

8.6 AWARDS DISTRIBUTION

Table 9 outlines the distribution of awards, recognizing outstanding achievements across various categories. The MindLoops Best Award was presented to SK Taman Kota Kulai 2, Group Hafiz for their innovative project "Plant Keeper," earning them a trophy and RM 3,000, while other notable awards, including the MindLoops Innovator Award and MindLoops Entrepreneur Award, celebrated creative and entrepreneurial excellence. Gold, Silver, and Bronze awards were also distributed, showcasing the diversity of talent and impactful contributions from participating teams.

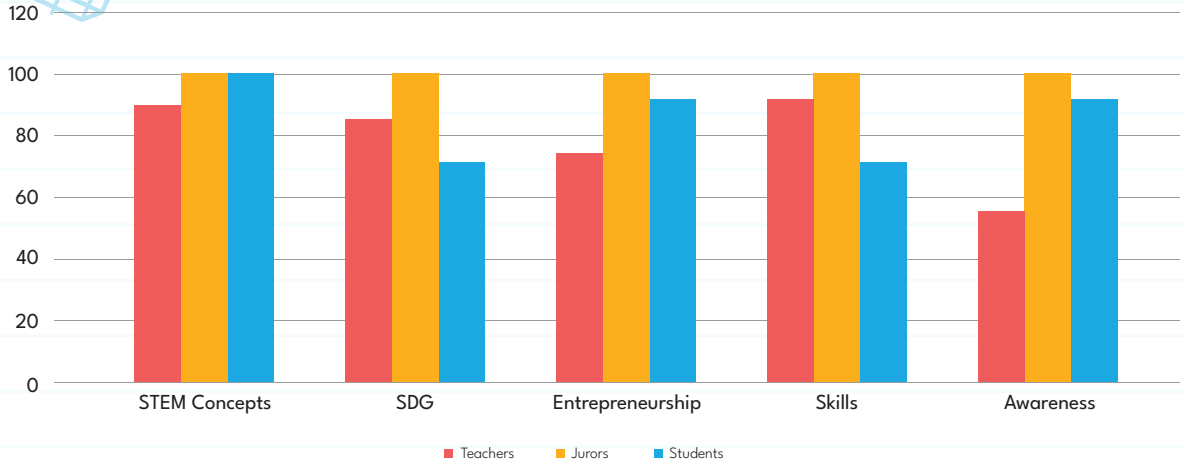
Table 9: Awards Distribution

AWARD	NO.	RECIPIENT	PRESENTED BY
Gold	4	SK Taman Kota Kulai 2, Group Hafiz	Puan Raja Damia Asilah binti Raja Auria Pengurus Pusat Satelit-emenanjung, Petrosains
		SK LKTP Bukit Besar, Group TechnoVators	
		SK Kahang, Group InnovateX	
		SK Taman Damansara Aliff, Group D'Aliff Squad	
Silver	5	SSK Bukit Hampar, Group SKBH Brillara	Tuan Haji Sazali bin Abd Hami Pengerusi ANGKASA Negeri Johor
		SK Kota Masai, Group Kompas Talent	
		SK Kampung Tengah, Group Princess Warrior	
		SK Seri Kampung Tengah, Group Skate Warrior	
		SK Seri Separap, Group Sespa	
Bronze	5	SK LKTP Belitong, Group Brave Girls	Tuan Haji Basiron Bin Yusof Pengerusi Persatuan Guru Besar Malaysia Cawangan Johor Bahru
		SK Seri Kampung Tengah, Group Green Warrior	
		SK Seri Separap, Group Sespa 2	
		SK Taman Molek, Group FutureMinds STEMpreneurs	

9.0 IMPACT

Chart 3 highlights the transformative impact of the program on participants, emphasizing its effectiveness in fostering STEM competencies, entrepreneurial skills, and awareness of Sustainable Development Goals (SDGs). It reflects on the experiences of key stakeholders—teachers, students, and jurors—and explores the educational outcomes, including skill development and innovation. Through hands-on learning and creative project development, participants demonstrated enhanced engagement with real-world challenges, teamwork, and innovative thinking. The subsequent sub-sections provide detailed insights into the participants' experiences, the educational impact of the program, and the innovative projects it inspired.

Chart 3: Impact



9.1 PARTICIPANTS EXPERIENCE

- **Teachers**
  - 90.9% reported the program as highly effective in linking STEM concepts to real-world applications around SDG goals.
  - Highlighted the event's hands-on approach as a key driver for student engagement.
- **Students**
  - 100% of students expressed enthusiasm for future participation, with many citing teamwork and innovation as highlights
  - Identified the program as a confidence booster for presenting ideas.
- **Jurors**
  - 100% of Jurors praised the alignment with Sustainable Development Goals (SDGs) and the quality of projects.
  - Recognized the innovative application of STEM and entrepreneurial principles.

9.2 EDUCATIONAL IMPACT

- **Increased Awareness**
  - 90.9% of teachers reported that students have a better understanding of SDG sustainability principles.
  - 81.8% of teachers believed that the programme has increased students' interest in STEM.
  - 72.7% of teachers reported that the programme helped to increase students' awareness and interest in entrepreneurship through Business Model Canvas.
- **Skill Development**
  - 90.9% of teachers noted improved teamwork, problem-solving, and presentation skills among their students. Specific skills enhanced include:

    Teamwork: Collaborating to design and present prototypes.
    Problem-Solving: Addressing technical challenges during model development.
    Communication: Delivering clear, impactful project pitches.

9.3 PARTICIPANTS INNOVATION

- **Types of Projects**

  Innovations included smart recycling bins, sustainable gardening tools, and noise-monitoring systems, tailored to address real-world challenges.

- **Creativity and Practicality**

  Projects showcased significant technical knowledge and entrepreneurial thinking, aligning closely with the SDGs.

9.4 TESTIMONIALS

- **From JPNJ**

  "Pada pendapat saya, program Mindloops makerspaces ini sangat bermanfaat kepada murid terutamanya kerana dapat mendedahkan murid kepada invovasi, kelestarian dan perniagaan. semoga prog ini dapat diteruskan lagi pada tahun seterusnya dan semoga penglibatan dari sekolah semakin meningkat. terima kasih juga kepada Edess Sdn Bhd serta rakan strategik seperti Yayasan Johor Corporatin, Yayasan Zarith Sofea, Petrosains, ANGKASA untuk program yang dapat mencetus minda dan kreativiti murid sekolah rendah."

  Puan Norazura Azreen Binti Omar Penolong Pengarah TVET - Sektor Pembelajaran Jabatan Pendidikan Negri Johor (JPNJ)

- **From Sponsors**

  "As a proud sponsor of the MindLoops® Maker Space, we are thrilled to witness the boundless creativity and ingenuity displayed by young innovators. This event is more than a competition; it is a platform that empowers students to address real-world challenges through STEM and TVET solutions. Supporting this initiative aligns perfectly with our mission to foster sustainable innovation and community impact. Seeing participants transform recycled materials into functional, eco-friendly models is truly inspiring. We are honoured to contribute to nurturing Malaysia's next generation of leaders and changemakers. Congratulations to all who participated – your ideas will shape a brighter future!"

  Encik Muhammad Munir Bin Mazlan – Yayasan JCorp

From Teachers

"Pertandingan ini memberi peluang pada murid-murid untuk menghasilkan ciptaan dan inovasi dengan mengaplikasikan ilmu yang mereka pelajari di sekolah. Melalui pertandingan ini juga, murid mendapat pendedahan tentang penggunaan AI untuk membantu mereka mendapat idea terbaik untuk digunakan dalam inovasi mereka. Pertandingan ini benar-benar mengiktiraf idea dan usaha murid-murid."

Cikgu Sharifah Hidayatul Mustakim - SK Taman Kota Kulai 2, Hafiz

"Program Mindloops Maker Space ini memberikan peluang untuk saya dan murid- murid mengembangkan idea kreatif dan inovatif dalam menyelesaikan cabaran sebenar. Sepanjang pertandingan, kami belajar banyak perkara, termasuk kemahiran berfikir kritis, bekerja dalam pasukan, dan mempersembahkan idea dengan cara yang berkesan. Menyertai program ini adalah satu pengalaman yang sangat berharga. Program ini juga membuka ruang untuk bertemu dengan ramai individu yang berkongsi minat yang sama dalam inovasi, selain menerima maklum balas membina daripada panel juri yang berpengalaman. Kemenangan dalam pertandingan ini telah menjadi dorongan untuk saya terus melangkah maju dalam bidang inovasi.Saya amat menggalakkan sesiapa sahaja untuk mengambil peluang ini kerana ia bukan sahaja memberikan pengalaman yang menyeronokkan, tetapi juga memupuk kemahiran yang berguna untuk masa hadapan. insya-Allah jika pertandingan ini akan diadakan lagi pada masa akan datang, kami akan cuba untuk sertai lagi."

Cikgu Nur Zakiah - SK Kahang, InnovateX

From Students

"Pertandingan ini memberikan kesempatan murid untuk mencuba bakat mereka dan mencipta satu inovasi yang akan dilihat dan dipelajari oleh generasi selepasnya."

HARIZ - SK Taman Kota Kulai 2

"Murid boleh mempelajari unsur STEM didalam pertandingan ini seperti math sains teknologi Dan engineering yang boleh dipelajari dengan mudah."

Abdul Hafizuddin - SK Taman Kota Kulai 2

From Jurors

"Program yang dijalankan amat menepati keperluan masakini iaitu penguasaan murid dengan elemen2 STEM untuk mencapai kepada tahap KBAT tertinggi iaitu mencipta. Selain itu, unsur keusahawanan yg diterapkan juga adalah satu Nilai tambah yang menjadi keperluan Dunia masakini.

Kesimpulannya, program ini boleh dikatakan sebagai satu program terbaik kerana memenuhi keperluan pendidikan masakini di samping dapat menawarkan ganjaran yang setimpal dengan usaha guru & murid. Tahniah!"

Puan Sureana Binti Masdar - (PPD Pontian) Jabatan Pendidikan Negri Johor (JPNJ)

"Program Mindloops Maker Space pada pandangan saya adalah program yg bagus dan wajar diteruskan kerana ia melihat dr sudut pandang kreativiti dan inovasi pelajar dari peringkat rendah dan gabungan elemen keusahawanan yang jelas. Ia turut menilai softskills pelajar dan rubrik yang ringkas serta mudah difahami amat membantu pihak juri."

Puan Shamshah Baharani Binti Hussein (PPD Kota Tinggi) Jabatan Pendidikan Negri Johor (JPNJ)

10.0 CHALLENGES ENCOUNTERED

- **Logistics:** We encountered challenges in logistics arrangements due to unexpected changes in the list of participating students and teachers, as well as last-minute withdrawals from the competition.
- **Financial:** Event financial resources were limited, as we approached sponsors towards the end of the year, and they were already committed to other programs.
- **Reach and Promotion:** Although event details were shared with all PPD Johor, some teachers missed the invitations sent via Telegram. Consequently, only a few schools noticed the message and inquired about the program.

11.0 RECOMMENDATIONS

- Schedule next event between April-June to fit in schools and JPNJ schedule.
- Expand capacity to include secondary schools in future editions.
- Introduce virtual participation options to reach remote schools.
- Organize pre-event workshops to help teams better prepare their proposals.
- Improve coordination with PPD for smoother event promotion.
- Include monetary prizes to participating schools beside top 3 awards.

12.0 FUTURE PLANS

- **Scaling the Program:** Include schools nationwide to broaden the program's reach and impact.
- **Integrating Technology:** Utilize advanced tools like AI, coding and 3D printing to enhance learning and project development.
- **Event Alumni Engagement:** Establish a mentorship network to support participants in future competitions to share experience and skills.
- **MindLoops Innovator and Entrepreneur Centre:** Establish a dedicated centre to provide comprehensive support and mentorship for students and teachers. This centre will focus on commercializing promising innovations and securing grants to further develop and bring these products to market.

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13.0 CONCLUSION

The MindLoops Maker Space Event 2024 stands as a testament to the power of collaboration, innovation, and education. Over the course of four months, the program succeeded in transforming ideas into impactful solutions, inspiring young minds, and aligning with global sustainability goals. By combining STEM principles with entrepreneurial practices, the event provided a platform for primary school students to develop
essential 21st-century skills and apply their learning to real-world challenges.

The program's success was made possible through the collective efforts of EDESS, the steadfast support of Jabatan Pendidikan Negeri Johor (JPNJ), and the invaluable contributions of sponsors like Yayasan Zarith Sofiah, Yayasan JCorp, and Petrosains. The dedication of the participating schools, teachers, and students further amplified the event's impact, creating a ripple effect that extends beyond the competition day.

Despite logistical and financial challenges, the event achieved notable milestones, including robust participation, the creation of innovative models, and increased public engagement. The program's ability to adapt, innovate, and inspire highlights its potential for scaling and future growth.

As MindLoops Maker Space evolves, its vision expands toward nationwide inclusion, deeper integration of technology, and the establishment of a dedicated MindLoops Innovator and Entrepreneur Centre. By continuing to foster creativity, critical thinking, and sustainability, this program promises to shape a
generation ready to tackle future challenges with ingenuity and determination.

The 2024 edition is not merely a conclusion but a stepping stone toward greater possibilities. The MindLoops Maker Space Event exemplifies how education, when combined with purpose and partnership, can transform lives and pave the way for a brighter, more sustainable future.

ANNEX 1

No.	Group	School	Team Members	Teacher-in-Charge	Project
01	SKBH Brillara	SK Bukit Hampar	1. Venkkates Rau A/L Dayarau 2. Airis Nur Khadeeja Binti Amir 3. Adriana Nurqaireen Binti Khairul Azuwan 4. Dhiya Nurzahra Binti Nazlan	Wan Nor Haslinda Binti Wan Zaidi	Flx Me!
02	InnovateX	SK Kahang	1. Mohamad Fahmi Mustaqkim Bin Mohamad Ismi 2. Nur Delisha Rania Binti Mohammad Haikal Josni 3. Ammar Qayyim Bin Abdul Rahim 4. Nur Delaila Azdira Binti Muhammad Hairulhambri	1. Nur Zakiah Binti Zakaria 2. Muhamad Zahin Syahir Bin Roslee	Silent Community
03	Kompas Talent	SK Kota Masai	1. Muhammad Hazam Hazim Bin Mohd Hassan 2. Muhammad Adzeem Haq Bin Mohd Nor Hazlee 3. Muhammad Aqeef Hafiy Bin Mohd Ezuan Hafez 4. Abu Jaafar Umar Bin Mohd Johairi	Nor Ain Binti Khalid	Kompas Intelligent

04	Brave Girls	SK LKTP Belitong	1. Zarifah Aisya Binti Mohd Khairulnasyar udie 2. Nurul Aisy Alisha Binti Azman @ Azmi 3. Adriana Marissa Binti Abdul Razak 4. Nur Izzazi Farhana Binti Mohd Hanafi	Zuraida Binti A. Sani	Agen Padam Serbaguna
05	TechnoVators	SK LKTP Bukit Besar	1. Alya Adrianna Binti Mohd Huzairy 2. Nur Rifqah Khaira Binti Mohd Rafa'in 3. Adam Mukhriz Bin Abu Yazid 4. Nurdarish Hani Qesha Jelita Binti Ismail	Nurul Syahirah Binti Solehkin	BioKomPlus
06	Green Warrior	SK Seri Kampung Tengah	1. Nursolehatul Amni Binti Mohd Zulkifli 2. Qaireena Nur Delisya Binti Mohd Hafiz 3. Ahmad Asif Nabeel Bin Mohd Hakimi 4. Irfan Zafran Nor Azman Bin Abdur Rahman	1. Noor Halini Binti Allias 2. Nuraini Hanisah Binti Maleki	Kelestarian Paya Bakau (Mangrove)
07	Princess Warrior	SK Seri Kampung Tengah	1. Amanda Dania Binti Ahmad Faizal 2. Arissa Husna Binti Ashraf 3. Nurlyana Zahratun Nisa Binti Mohd Hafiz 4. Puteri Qairah Natasha Binti Mohd Khirry	1. Ariesah Binti Fathil 2. Nurul Shahira Binti Shahrom	BH Soap
08	SkaTe Warrior	SK Seri Kampung Tengah	1. El-Putra Suhayb Rama Bin Imran Ramadhan Rama	1. Noor Halini Binti Allias 2. Nuraini Hanisah Binti Maleki	Inovasi Mesra Alam

			2. Muhammad Aqiff Rizki Bin Abdullah Musi 3. Nur Hanis Syuhaidah Binti Zakaria 4. Airis Sofea Binti Yazid		
09	SESPA	SK Seri Separap	1. Muhammad Harraz Bin Muhammad Halim 2. Muhammad Rayqal Danny Bin Mohd Razali 3. Muhammad Rizqi Bin Saifulhadi 4. Umar Mukhtar Bin Mohamad Rafee	Mohamad Zahari Bin Abu Bakar Yoel Bin Baidos	R.T.G
10	SESPA 2	SK Seri Separap	1. Ahmad Ibrahim Amsyar Bin Abdul Hafizh 2. Alisya Zara Binti Ariffin 3. Nurain Khalisa Binti Mohamad Rafee 4. Muhammad Alif Huzaimi Bin Fazli	Mohamad Zahari Bin Abu Bakar	Stay Bright, Stay Right
11	D' Aliff Squad	SK Taman Damansara Aliff	1. Muhammad Amar Rizqy Bin Kamarudin 2. Muhammad Hazim Bin Muhammad Tarmizi 3. Ahmad Thariq Bin Zulfakar 4. Adam Haidar Bin Nazrie	1. Hidayah Binti Abdul Latif 2. Maiezah Binti Meli	Mr. Crab the Dustbin
12	Hafiz	SK Taman Kota Kulai 2	1. Aaqil Ziqri Bin Khairul Ridzuan 2. Muhammad Qaireen Firash Bin Mohd Zaki	Sharifah Hidayatul Mustakim Sy Mustaffa	Plant Keeper

			3. Abdul Hafizuddin Bin Abdul Faizal 4. Muhammad Hariz Bin Noor Hezreey		
13	FutureMinds STEMpreneurs	SK Taman Molek	1. Mohamad Asraff Bin Mohamad Azuha 2. Muhammad Rizky Bin Mohammad Fatihi 3. Muhammad Rayyan Bin Roslizam 4. Muhammad Farhad Bin Rahim	Muhammad Hafizu Aiman Bin Jusoh	EcoMushFarm: Teknologi Hijau Penanaman Cendawan Abad ke-21

ANNEX 2

First Presentation Rubric: Business Model Canvas (BMC)

Kriteria	1 Lemah	2 Terhad	3 Sederhana	4 Baik	5 Cemerlang	Skor diberi
Minda Keusahawanan	Tiada elemen keusahawanan dalam model atau tiada bukti pemikiran keusahawanan.	Pemikiran keusahawanan sangat minimum dengan sedikit peluang pasaran	Beberapa elemen keusahawanan dengan pengiktirafan peluang pasaran yang sederhana.	Pemikiran keusahawanan yang jelas dengan pengiktirafan peluang pasaran yang baik.	Pemikiran keusahawanan cemerlang dengan inovasi, strategi kewangan kukuh, dan potensi keuntungan	
Penghuraian Elemen-Elemen Utama dalam BMC	Tidak menjelaskan elemen-elemen utama BMC.	Penjelasan elemen sangat terhad dan tidak mendalam.	Penjelasan elemen sederhana tetapi masih memerlukan penambahbaikan.	Penjelasan elemen cukup baik dan relevan dengan model.	Penjelasan sangat terperinci, mendalam, dan sangat relevan dengan model.	
Struktur dan Susunan BMC	Struktur tidak lengkap dan susunan elemen tidak jelas.	Struktur tidak lengkap atau kurang jelas dalam beberapa elemen.	Struktur elemen yang baik tetapi memerlukan sedikit penjelasan tambahan.	Struktur dijelaskan dengan baik dan hampir lengkap.	Struktur dan susunan elemen dijelaskan secara terperinci dan sangat jelas.	
Kriteria	**1 Lemah**	**2 Terhad**	**3 Sederhana**	**4 Baik**	**5 Cemerlang**	**Skor diberi**
Kesesuaian Elemen BMC dengan Model	Elemen BMC tidak selaras dan tidak sesuai dengan model.	Hubungan antara elemen BMC dan model sangat lemah.	Hubungan antara elemen BMC dan model boleh difahami tetapi masih ada kelemahan.	Elemen BMC selaras dan menyokong model dengan baik	Elemen BMC selaras sepenuhnya dan mendukung model dengan kukuh.	
Keselarasan dengan Matlamat Projek (STEM, TVET & SDG)	Model tidak selaras dengan matlamat projek atau tidak relevan.	Model kurang selaras dan memerlukan penambahbaikan dari segi kesesuaian dengan matlamat projek.	Model selaras tetapi memerlukan penjelasan lebih lanjut mengenai kesesuaiannya.	Model selaras dengan baik dan menunjukkan pemahaman yang jelas.	Model selaras sepenuhnya dan sangat relevan dengan prinsip STEM, TVET, dan SDG.	
Komunikasi dan Kejelasan Penyampaian	Tidak dapat menerangkan elemen BMC dengan jelas.	Penerangan elemen BMC kurang jelas dan memerlukan banyak penambahbaikan.	Penerangan asas elemen-elemen BMC yang boleh difahami tetapi memerlukan penambahbaikan.	Penerangan elemen-elemen BMC jelas dan mudah difahami.	Penerangan sangat jelas, mantap, dan mudah difahami oleh pendengar.	

Second Presentation Rubric: Innovation Model (STEM/TVET)

Kriteria	1 Lemah	2 Terhad	3 Sederhana	4 Baik	5 Cemerlang	Skor diberi
Struktur dan Komponen Model	Model tidak jelas, struktur dan komponen tidak dikenal pasti.	Struktur dan komponen dijelaskan secara tidak lengkap atau kurang jelas.	Struktur dan komponen dijelaskan dengan baik tetapi ada bahagian yang memerlukan penjelasan lebih lanjut.	Struktur dan komponen dijelaskan dengan baik.	Struktur dan komponen dijelaskan secara jelas, terperinci, dan lengkap.	
Inovasi dan Keunikan Model	Model tidak menunjukkan sebarang inovasi atau unsur STEM/TVET.	Model menunjukkan sedikit inovasi atau unsur STEM/TVET tetapi kurang jelas.	Model menunjukkan tahap inovasi yang baik tetapi masih dalam ruang lingkup biasa.	Model menunjukkan keunikan dan penyelesaian berbeza dengan penerapan STEM/TVET yang jelas.	Model sangat inovatif, dengan penyelesaian baru yang kreatif serta penerapan STEM/TVET yang menarik.	
Kefungsian dan Praktikaliti Model	Model tidak berfungsi atau sangat sukar dilaksanakan.	Model berfungsi secara terhad dan memerlukan banyak sumber serta kos tinggi.	Model berfungsi secara umum dan boleh dilaksanakan dengan usaha sederhana.	Model berfungsi dengan baik dan mudah dilaksanakan dengan kos rendah.	Model sangat berfungsi dan mudah dilaksanakan dengan sumber yang rendah serta memenuhi semua keperluan praktikal.	
Kriteria	**1 Lemah**	**2 Terhad**	**3 Sederhana**	**4 Baik**	**5 Cemerlang**	**Skor diberi**
Bahan yang Digunakan	Bahan tidak sesuai dan berbahaya.	Bahan kurang sesuai dan memerlukan penambahbaikan dari segi keselamatan dan kualiti.	Bahan sesuai dan selamat tetapi boleh diperbaiki.	Bahan berkualiti, selamat, dan melibatkan elemen kitar semula.	Bahan berkualiti tinggi, mesra alam, dan digunakan dengan cara yang kreatif dan efisien.	
Keselarasan dengan Matlamat Projek (STEM, TVET & SDG)	Model tidak selaras dengan matlamat projek.	Kurang selaras dengan matlamat projek.	Selaras tetapi memerlukan lebih penjelasan.	Selaras dengan baik dan menunjukkan pemahaman yang baik.	Selaras sepenuhnya dengan prinsip STEM, TVET, dan SDG, serta sangat relevan.	
Pembentangan dan Komunikasi	TTidak dapat menerangkan konsep dengan jelas.	Penerangan kurang jelas dan memerlukan banyak penambahbaikan.	Penerangan asas yang dapat difahami tetapi memerlukan penambahbaikan.	Penerangan yang jelas dan mampu menghubungkan konsep dengan baik.	Penerangan sangat jelas, menunjukkan pemahaman mendalam dan boleh menjawab dengan sangat baik	