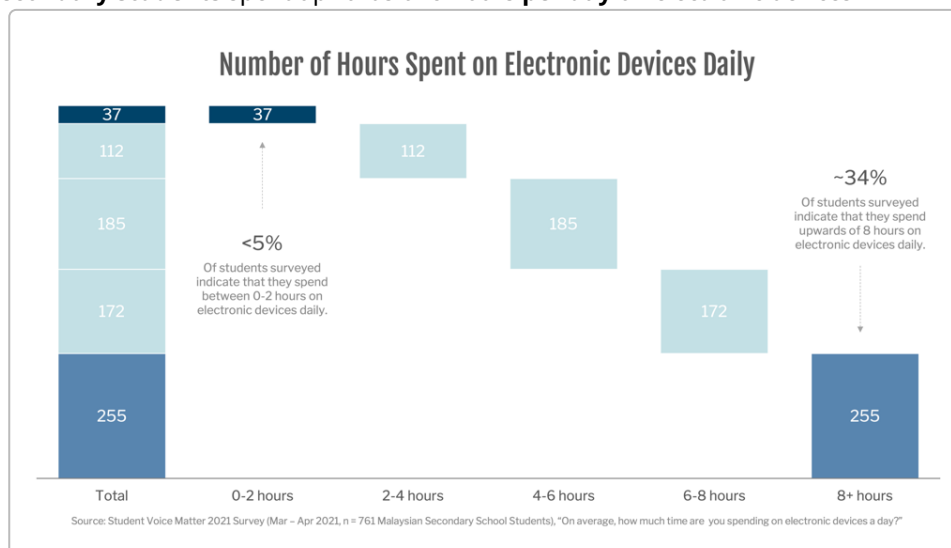


Viability of a Gamified SPM Learning Application – Deep Research Study

1. Market Overview

SPM Student Population: Each year, roughly **350,000–400,000** students sit for the Sijil Pelajaran Malaysia (SPM) examination. For example, about **402,956 candidates** sat for SPM 2024 nationwide ¹. These candidates are typically **17-year-old** secondary school students (Form 5), with a mix of school-based and private candidates. The cohort size has remained in the few-hundred-thousands annually (e.g. ~422k in 2018, ~389k in 2019) ² ³, making SPM a significant recurring market.

Demographics & Connectivity: Malaysian youth are **highly connected digitally**. In fact, **92% of children aged 5–17** were already using the internet as of 2018, and **91.8%** of these young users accessed it via smartphones ⁴. Smartphone ownership is nearly ubiquitous among teens – national surveys show **90%+ of households have mobile phone access**, and over **98%** of those phones are internet-capable smartphones ⁴. Urban-rural divides persist (the poorest students had less access during the pandemic), but overall device penetration is very high. A 2021 student survey found about **34% of secondary students** spent upwards of 8 hours **per day** on electronic devices



. This heavy screen time underscores how ingrained digital tools are in students' lives.

Edtech Adoption Trends: Malaysia's edtech usage has accelerated in recent years, boosted by both technology initiatives and necessity (COVID-19). The **COVID-19 pandemic** forced schools online, making tools like Google Classroom, Zoom, and digital content mainstream virtually overnight. By one estimate, **over 70% of Malaysians** have now engaged in some form of online learning ⁵. Government policy has also been supportive – the national digital economy blueprint (MyDIGITAL) encourages e-learning innovation ⁶, and the Ministry of Education has rolled out platforms (e.g. DELiMa) and partnerships to integrate tech in schools. The result is a growing comfort with online study: a moderate-to-high acceptance of Google Classroom among students, widespread use of WhatsApp/Telegram for class communication, and teachers increasingly blending digital resources into teaching. The **e-learning market in Malaysia** has been growing ~15–17% annually and is projected to reach **USD 400 million by**

2025 ⁷, indicating substantial momentum. However, access gaps remain – one analysis noted about **60% of students in B40 (low-income) communities** struggled to engage in online learning due to device or internet limitations during the pandemic ⁸. Overall, the market comprises a **digitally savvy youth population** with high mobile usage, but also a need for solutions that are inclusive and engaging to keep students motivated.

2. Competitive Analysis

The current landscape for SPM-focused learning apps in Malaysia includes a mix of local startups, publisher-backed platforms, and informal resources. Below are **notable existing apps/platforms** (especially those with gamified elements), along with their features, user reception, monetization models, and pros/cons:

- **JomStudy** – *SPM Revision Super-App*: JomStudy is a popular all-in-one revision app for Form 1–5. It offers **free SPM notes and quizzes** for all major subjects, plus flashcards, state trial exam papers, and even an AI chatbot helper ⁹ ¹⁰. It has **100K+ downloads** on Google Play and boasts a **4.8★ rating** (one of the highest-rated SPM apps) ¹¹. Students praise its comprehensive notes (prepared by experienced teachers) and the ability to “*learn and quiz without paying*” ¹⁰. JomStudy’s **monetization** is freemium – core content is free (supported by ads), while advanced features like live tuition classes are paid (it markets affordable live online tuition as an add-on) ¹². *Strengths*: Rich content library, interactive quizzes with explanations, very high user satisfaction. *Weaknesses*: Relatively basic gamification (quizzes and flashcards are interactive but there’s no obvious game narrative or competitive leaderboard). Some premium features require payment (as FINCO notes, “certain features unlock with payment”) ¹³, and the presence of ads could be a distraction.
- **SPMFlix** – *Massive Free Content Platform*: SPMFlix is Malaysia’s largest **free e-learning platform** for SPM (and IGCSE) ¹⁴. Launched in 2017 in collaboration with MOE, it is a **non-profit initiative funded by the BAC Education Group** ¹⁵. SPMFlix provides **over 9,000 video lessons**, notes, quizzes and past-year questions, all accessible via its website or mobile app ¹⁶ ¹⁷. It also integrates a community: students can post questions, comment, and join discussion feeds to get help from teachers and peers ¹⁸. Uniquely, SPMFlix hosts **live “SPM seminar” webinars** each year before exams (free revision workshops), and archives the recordings for on-demand viewing ¹⁹. *Strengths*: Completely free with a vast library of high-quality lessons; endorsed by media and partnered with MOE, lending credibility. The community interaction and real-time Q&A features add engagement. *Weaknesses*: The mobile app adoption is modest (1K+ downloads ²⁰, many students use the web version). Gamification elements are limited – while there are quizzes (“Challenge Your Knowledge” mode) ¹⁷, there aren’t points or game mechanics beyond the social learning aspect. As a nonprofit, sustainability depends on continued funding by its sponsor (BAC); however, this also means no paywalls and likely no ads, which is user-friendly.
- **EduBijak** – *Gamified AI Revision App*: EduBijak (by EduAdvisor) is a **new entrant (2025)** that strongly emphasizes gamification. It uses **AI-powered chatbots** for each subject, allowing students to chat and get instant explanations to questions ²¹ ²². Notably, EduBijak includes a **points and leaderboard system**: students earn points for every question answered correctly and climb a public leaderboard for “bragging rights” ²³. It even teases rewards: “study and get rewarded” with chances to win prizes as you use the app ²⁴. Each AI tutor bot has a distinct “personality” (some whimsical, some strict) to make learning more fun ²⁵. Currently around 100+ downloads (very early stage) ²⁶. *Strengths*: High novelty factor due to AI tutors and explicit gamification (points, competition, character). It aligns well with motivating students through

game rewards and instant feedback. *Weaknesses:* Being new, content depth and user base are still limited – it may not yet cover all topics in detail. Leaderboards are only motivating if a critical mass of users is active. Monetization is not yet clear (likely free launch to build traction); sustainability will depend on converting users to a premium model or sponsorship later. As an unproven app, it needs to gain trust that its AI answers are accurate for SPM standards.

- **i-LEARN Ace (Sasbadi)** – *Publisher's E-Learning Platform:* i-LEARN Ace is a platform by Sasbadi (a major educational publisher) covering Year 1 to Form 5. Aimed at schools and individual subscribers, it's a **hybrid online/offline** system with notes, mind maps, assessments, and more ²⁷ ²⁸. Gamified elements include **quiz games and tokens** – students earn game tokens for completing practices, which they can use to play educational mini-games ²⁹. It has a rewards system to motivate practice and tracks progress with analytics for teachers/parents ³⁰. The content is aligned to the national syllabus (including objective and subjective questions, PB assessments, etc.) and includes AR-enhanced materials ³¹ ³². *Strengths:* Very comprehensive content (leverages Sasbadi's extensive question bank and books). Offers structured progress reports and is used in some schools. *Weaknesses:* **Paid subscription model** – likely limiting access to those whose schools or parents purchase it. The interface and experience can feel more like a traditional e-learning portal; the gamification (tokens for games) is a nice touch but may appeal more to younger users and may not fully "game-ify" core SPM revision. Its app has ~10K downloads ³³, suggesting moderate adoption, possibly mostly through institutional channels.

- **Other Resources:** In addition to the above, **informal competitors** occupy students' attention. For instance, many SPM candidates turn to **YouTube** for revision – channels like ITTV Education (which offers syllabus-based video lessons) have large followings ³⁴. Some use Q&A platforms or forums: global homework-help apps like *Brainly* and *Chegg* have Malaysian users (Brainly has a Malay version where students ask SPM questions). There's also a thriving culture of **peer help via social media** – students form WhatsApp/Telegram study groups and follow popular teacher influencers on TikTok/Instagram for quick tips. While not "apps" in the traditional sense, these channels address student needs for quick answers and engaging content. Their prevalence is a signal that any new SPM app must compete for student screen time against not just dedicated study apps but also these **alternative learning avenues**.

Competitive Summary: No single app has a monopoly on the SPM revision space yet – instead we see a mix of free offerings (often ad- or sponsor-supported) and premium services. **Content breadth vs. engagement** is a trade-off: apps like JomStudy and SPMFlix offer breadth of content; newer ones like EduBijak focus on engagement (gamification) but with less content initially. **Monetization models vary** widely: from freemium (JomStudy) to fully free non-profit (SPMFlix) to subscription (i-Learn Ace). This indicates an opportunity for a well-rounded app that can combine rich content **and** effective gamification, while choosing a sustainable revenue model that Malaysian students and parents find acceptable.

3. User Behavior & Pain Points

Understanding how students currently study for SPM – and the pain points they face – is crucial in identifying opportunities for a gamified learning app.

Study Habits & Preferences: SPM students tend to use a **blend of methods** for revision: - **Tuition Classes:** It's very common for students to attend after-school tuition. One report noted the *average Malaysian student spends ~6 hours a week in extra tuition classes* ³⁵, reflecting how mainstream private

tutoring is. Many students (especially in urban areas) enroll in tuition centres or hire tutors for key subjects. This indicates that students (and parents) are willing to invest time and money outside of school for better results. - **Revision Books & Past Papers:** Traditional revision books, exam paper compilations, and school-provided modules are staples. Practicing *past year papers* is considered one of the most effective prep methods ³⁶. Students often seek collections of past exams (e.g. from sites like afterschool.my ³⁷) and do timed practices. Any app that can incorporate official past questions or high-quality practice questions will align with this behavior. - **YouTube & Online Videos:** A sizeable segment prefers video explanations over reading. During the pandemic and beyond, students flocked to YouTube channels for SPM – e.g. free lessons on sciences, math problem walkthroughs, or Bahasa essay tips. As FINCO highlighted, some feel like videos “simulate a classroom setting” and use them for “bite-sized refreshers of important concepts” ³⁴. This suggests students value *engaging audio-visual content*, especially when it feels like a teacher is personally coaching them. - **Educational Apps/Sites:** The tech-savvy are experimenting with apps (like those in the competitive analysis). Students appreciate interactive tools – for instance, JomStudy’s uptake shows demand for quizzes/flashcards on-the-go ³⁸. Still, many students are *not aware of all these apps* – word-of-mouth and school recommendations heavily influence adoption. When they do use apps, it’s often for specific needs (e.g. quiz drilling, ask-an-expert help) rather than replacing all study materials.

Use of Social & Community: Malaysian students also leverage social platforms for learning: - **Messaging Groups:** Class WhatsApp or Telegram groups are ubiquitous for sharing notes, asking questions, and even quizzing each other. Notably, a survey found **57% of Malay-speaking respondents** chose Telegram/WhatsApp as their top online learning platform, far higher than English-speaking peers ³⁹. This implies that for many students, learning happens in group chats (likely because it’s accessible and familiar). - **Online Forums/Reddit:** Some turn to forums like Lowyat.net or subreddits (r/malaysia or r/educationMY) to seek study advice. For example, on Reddit a former SPM candidate advised that there are “a lot of fun lecture videos on YouTube” and described using them throughout online learning ⁴⁰. Students also exchange tips about schedules, dealing with stress, etc., on these platforms. However, these are more ancillary – they fulfill the need for **motivation and tips** rather than structured learning.

Pain Points for Students: 1. **Lack of Engagement & Motivation:** A recurring theme is that studying for SPM can be *dry and tedious*. When schooling went virtual, students reported “unclear, inconsistent structure of online learning and **lack of engaging interaction**” as major challenges ⁴¹. Boredom and procrastination are common – many struggle to focus on textbooks or recorded lectures for long. In a 2021 survey, **70% of students said they wanted more fun and engaging activities** in their learning (nearly double from the year prior) ⁴². This highlights a gap: traditional study methods often fail to hold their interest, and students actively crave gamified or enjoyable learning experiences. 2. **Over-Reliance on Rote Learning:** SPM syllabi are content-heavy (especially subjects like Sejarah or Biology), leading to a lot of memorization. Students often resort to brute-force repetition, which can be frustrating and mind-numbing. They might not know *effective techniques* beyond reading and highlighting. An app that introduces game-like active recall (quizzes, flashcard games) could alleviate this pain by making recall practice more efficient and less boring. 3. **Stress and Pressure:** SPM is high stakes – results determine pre-university pathways and scholarships. Thus, students face immense pressure from parents, teachers, and themselves. This leads to anxiety, and sometimes burnout. Long study hours (tuition plus school plus homework) leave them mentally exhausted. As one 17-year-old noted, online learning combined with high expectations worsened mental health, and **students “lack personal space” or time to unwind** ⁴³ ⁴⁴. Any solution that can blend study with play might help reduce stress by injecting elements of fun and providing positive reinforcement (e.g. in-app rewards celebrating progress, rather than just endless drills). 4. **Resource Gaps & Quality of Help:** Not all students have equal access to good resources. Those in rural schools or poorer households might not afford many reference books or tuition. They often have patchy internet or share devices with siblings

(though phone access is high, data connectivity can be an issue). Additionally, students sometimes find it hard to get **immediate help** on doubts – a school teacher may not be available after class, and not everyone has a private tutor on call. This leads to unanswered questions and frustration when stuck on a topic. It explains the appeal of AI chatbots or forums where they can quickly ask something. A successful app should aim to provide *on-demand support* (via AI or tutor chats or a community) to fill this gap. 5. **Exam Technique and Feedback:** Another pain point is learning *how* to answer SPM questions to score marks. Students frequently mention doing past papers but not being sure if their answers are good without feedback. Marking schemes can be obscure. They desire feedback on essays or step-by-step guidance on solving problems. Currently, they rely on teachers or discussions for this. An app that gives **instant feedback or model answers** (as some AI tutors attempt) can address this need, especially if gamified (e.g. hints unlocked as “power-ups” after attempts).

In summary, SPM students are hardworking but often **overwhelmed**, seeking any tool that can make revision **more efficient, engaging, and supportive**. They juggle multiple resources: from thick revision books to TikTok videos. A gamified learning app can attract them by tackling their pain points – making studying feel **less like a chore** and more like a challenge or game, providing quick help when they're stuck, and fitting into their digitally connected lifestyle.

4. Gamification Elements in Education

Gamification in educational apps has proven effective globally at boosting student engagement and motivation. Below are some **successful gamification examples** and elements from worldwide apps, followed by how these could be applied in the **Malaysian SPM context**:

Global Examples of Gamified Learning:

- **Duolingo (Language Learning):** A benchmark for gamified education apps, Duolingo uses a combination of **points, levels, streaks, and badges** to keep learners hooked. Users earn XP points for completing lessons, maintain a daily streak for consistent practice, and can compare on leaderboards. The app has an internal currency (lingots) to “buy” fun extras, and constantly gives positive feedback ⁴⁵. This model has driven Duolingo's **500+ million users** to keep coming back daily, illustrating how reward loops and gentle competition can sustain engagement.
- **Kahoot! (Classroom Quiz Game):** Kahoot turns quizzes into a **fast-paced game show**. Teachers or students can host multiple-choice quizzes where participants earn points for correct and quick answers, with a scoreboard creating excitement each round. Its use of bright visuals, music, and instant results makes learning feel like a fun competition. Kahoot is hugely popular in classrooms worldwide (4.7★ on Google Play, 600k+ reviews) ⁴⁷ ⁴⁸. The takeaway is that **competition + real-time feedback** can make even drilling facts exciting.
- **Khan Academy (Self-Paced Learning):** Khan Academy incorporates **achievement badges and skill progress maps** into its platform ⁴⁹. Learners earn badges with fun titles (“Moon”, “Sun” badges for streaks of correct answers, etc.) and accumulate “energy points” as they complete exercises ⁵⁰. It also visualizes progress as a knowledge map or constellation, so students see their “learning journey” as an adventure ⁵¹. This sense of progression and collecting achievements provides learners a concrete sense of accomplishment beyond just test scores.
- **Prodigy & Other Educational RPGs:** For younger students especially, some apps like Prodigy (math) and Classcraft turn learning into a **role-playing game**. Students have avatars that gain experience, level up, and can embark on quests by solving academic problems. They might earn equipment or pets as rewards. This narrative-driven gamification taps into the **Epic Meaning & Calling** core drive (wanting to progress a story or purpose) and can be very effective in motivating sustained engagement, as students feel they are “playing” rather than studying.
- **Quizizz and Edutainment Quizzes:** Quizizz, similar to Kahoot, adds gamy features like memes after each question, power-ups, and allows homework quizzes that students can do at their own pace but still see a leaderboard at the end. It's used a lot in schools, including in Malaysia, because it combines learning with fun and humor. The success of Quizizz and Kahoot demonstrates the universal

appeal of **immediate feedback, points, and light-hearted competition** in learning. - **Habit-building Apps (e.g. Habitica, Todoist):** While not subject-learning apps, these show gamification for motivation. Habitica turns your to-do list into an RPG where checking off tasks earns you XP and damage to monsters, whereas Todoist uses “karma points” and levels for completing tasks ⁵². The principle applied to education is similar: encourage daily study habits via **streaks and leveling systems**. Duolingo, as mentioned, does this with language learning by daily goals; an SPM app could implement a “daily revision streak” reward to build consistency.

Effective Gamification Elements to Consider: *(as identified by education research and successful apps)*

⁵³ ⁵⁴ : - **Points & Scoreboards:** Award points for completing quizzes, lessons, or challenges. Accumulate points to rank on a leaderboard among friends or nationwide. This fosters competition and a sense of accomplishment. In an SPM app, points could be tied to micro-achievements (e.g. 10 points for a quiz, bonus for streaks) and a leaderboard could be done by school or region to spur friendly competition (important: ensure competition remains healthy and not discouraging to weaker students). - **Badges & Achievements:** Provide badges for specific milestones – e.g. “Math Whiz” badge for scoring A on 5 math quizzes, “History Buff” for completing all Sejarah chapters, “Streak Champion” for studying 7 days in a row, etc. These badges should be visually appealing and shareable. They act as **collectibles** that can motivate students to “catch ‘em all” and signal their expertise in certain areas ⁵⁵. - **Levels/Progress Bars:** Implement a leveling system where students level-up as they earn experience (through study time or points). Each level could unlock new content or simply be a status that students can be proud of (“Level 10 SPM Master”). A progress bar for each subject (e.g. 60% of Form 5 Biology syllabus mastered) can also tap into the human desire to complete a bar to 100%. It gives a **clear sense of progress** which is psychologically rewarding. - **Immediate Feedback & Rewards:** Key to gamification is *instant feedback*. When a student answers a question, the app should respond with something (confetti and “Correct!” for right answers, encouraging hints or humorous memes for wrong ones). Small rewards like a sound effect, virtual coins, or unlocking an explanation video can make even wrong answers a learning opportunity rather than a disappointment. - **Story and Challenges:** Adding a storyline or context can enhance engagement. For instance, the app could frame revision as a mission (e.g. “Save the kingdom of Matematik by solving these problems!” or a detective theme for Science quiz investigations). Quests or weekly challenges (“Score 80%+ on three English quizzes this week to earn a bonus”) create goals beyond just “study because you have to.” A narrative or thematic approach can particularly help subjects students find dry (Sejarah dates could be turned into a timeline game, or Chemistry into a potion-mixing game scenario). While not every student needs a storyline, having optional challenge modes can cater to those who enjoy that style. - **Social Gamification:** Leverage the inherently social nature of Malaysian students. This can include **peer competition and cooperation**. For example, a feature where students can form study “guilds” or teams and collectively earn points, or challenge each other to beat high scores on a quiz. Duolingo allows following friends to see their progress ⁵⁶; similarly, an SPM app could let students share their achievements or invite friends to compete in a quick trivia battle. Tapping into existing social networks (maybe integrating with WhatsApp or a built-in forum) and rewarding helpful community behavior (badge for answering another student’s question) can turn the app into a motivating social space rather than a solitary grind. - **Adaptive Gamification:** Ensure the game elements adjust to the user’s level. If a student is struggling, the game could adapt by offering “XP boost” for completing a remedial module, or unlocking a mini-game after they do a certain amount of practice (to give a break/reward). The idea is to use gamified elements not just as bells and whistles, but to **drive pedagogical outcomes** – e.g., encourage a student to revisit weaker topics through challenges, or reinforce consistent practice via streaks.

Applying to Malaysian SPM Context: The gamification features above should be tailored to SPM content and culture: - Subjects like **History (Sejarah)** and **Moral Education** could be made into quiz tournaments or story-based quests, since these are often seen as dry memorization subjects. For example, a timeline ordering game for historical events, with points for each correct chronology, or a

role-play scenario where you “debate” historical figures (via quiz questions) to earn badges. - **Mathematics and Science** could benefit from challenge puzzles – e.g. timed problem-solving races, or “boss battles” where a student must answer a set of difficult questions to defeat a final boss (covering integrated topics). This can make practice more exciting than doing static past papers. - Include some **Malaysian flavor** in the gamification: perhaps the leaderboard could use school names or states (sparking inter-school/state rivalry in a fun way), or badges that reference cultural icons (a “Harimau Math” badge for a fierce maths student, etc.). Localization will make the game elements resonate more with students. - It’s important that while gamifying, the app aligns with the **exam format**. For instance, SPM has structured and essay questions too, not just MCQs – gamification here could mean awarding points for drafting an essay outline or using AI to simulate a scoring of their essay with feedback, turning essay practice into a more game-like iterative challenge (maybe “beat your previous score” game). - **Reward balance**: Rewards could even extend to real-life incentives (if partnerships allow) – e.g., top leaderboard students or those who significantly improve could win scholarships, book vouchers, or school recognition. However, even purely virtual rewards, if designed well, can be highly motivating (teenagers do take pride in collecting digital trophies especially if their peers see them).

In summary, gamification done right can turn the SPM preparation journey from a lonely, stressful marathon into a more **engaging, game-like experience** where students feel motivated to participate daily, challenge themselves, and even have a bit of fun. The key is to integrate these elements in a way that complements the serious business of exam prep – maintaining educational value while leveraging the “dopamine boost” that games provide ⁵⁷.

5. Monetization Strategies

Building a sustainable revenue model for an SPM gamified app is essential, but it must be sensitive to the target users (students and parents) and the competitive context (many free resources). Here are viable monetization strategies and considerations:

- **Freemium Model (Free + Premium Upsell)**: This is a common approach in edtech. Provide a substantial amount of content for free to attract users (as JomStudy and others do), then charge for premium features. For example, free users get daily quizzes, basic notes, and some gamified features, while premium subscribers unlock advanced content (full past year paper sets, intensive revision modules), ad-free experience, or special features like personal tutor chat or detailed progress analytics. A **low-cost monthly subscription** or one-time upgrade for a bundle (e.g. RM10–RM30/month or RM100/year range) could be feasible if the value is clear – urban parents already paying for tuition might see this as a small add-on for extra practice. Freemium balances accessibility with revenue: ensure the free tier is genuinely useful (to build a large user base and community), while the paid tier targets power users who want an edge.
- **Ad-Supported Free Content**: Incorporating advertisements can monetize free users, as long as it doesn’t overly disrupt learning. This could involve banner ads or short sponsor videos that students watch to earn in-app rewards (for instance, “watch a 15-second educational ad to get 10 extra coins or another attempt at a bonus quiz”). Many apps do this to keep content free. However, ads should be **education-friendly and age-appropriate**, and the frequency should be controlled to avoid driving students away. Given Malaysian market sensitivities, one could also pursue **sponsorships**: e.g. a company or government program sponsors the app and in return there’s a logo or message (“This quiz is brought to you by X”). This is somewhat how SPMFlix is funded (by an education group’s CSR) ¹⁵. If an app can demonstrate high engagement, there may be corporate CSR funds or public grants available to subsidize it, which is an indirect monetization.
- **Partnerships with Schools/Tuition Centers (B2B2C)**: Rather than charging the student directly, the app could partner with institutions. For instance, tuition centers might license the app for

their students as a value-add service. A tuition centre could use the app's gamification to track their students' progress and even run competitions among their classes. Similarly, schools might adopt the app (especially private or high-performing schools aiming to boost results) – the app could sell **school packages** where teachers get a dashboard and can assign gamified homework, and the school pays a license fee. This B2B approach means revenue from institutions while students still use it for free. The **downside** is longer sales cycles and reliance on institutional buy-in, but it's a valid path (Sasbadi's i-Learn Ace uses school sales in part).

- **Premium Content or Tutoring Services:** Another model is to keep the core app free but charge for **optional services**. For example, the app could offer live online workshops, or "Pro" revision courses (maybe gamified live quizzes with star teachers) leading up to SPM for a fee. Or one-on-one tutoring on demand: a student could purchase tutor credits to get human help via the app's chat/call for tough questions (similar to how some use Snapask or GotIt!). Gamification can actually drive interest to these services (e.g. a student struggling in the app might be prompted "Need extra help? Join our intensive seminar this weekend"). This way, the daily use remains free and fun, but conversion to paid happens for those who want **expert help or intensive prep**.
- **Affiliate Partnerships and E-commerce:** Given students preparing for SPM also buy reference books, past paper compilations, etc., the app could partner with publishers or online bookstores. For instance, after a student finishes a topic quiz, the app might suggest "You might want to practice more – check out this recommended workbook" with a link to purchase. If done tastefully, it could generate affiliate revenue. Additionally, tie-ups with educational product companies (calculators, stationery) for discounts or coupon rewards in-app could be a win-win: students get real product rewards for their points (e.g. redeem 1000 in-app coins for a RM10 book voucher), which are funded by the partner as a promotion.
- **Subscription Tiers for Different Users:** Consider segmenting offerings: e.g. a **basic student plan** vs. a **premium parent/teacher plan**. A parent might pay for a dashboard to monitor their child's progress or receive detailed analytics/tips on how to support the child (many parents worry about SPM too and might pay for insights or extra practice for their kid). A teacher plan could allow a teacher to use the app to set up classes and get reports (monetizing at the teacher/school level as mentioned). Students themselves might only pay if the price is very low or if it grants them a competitive edge (like access to "legendary" level questions or mock exams).
- **Freemium with Ads Hybrid:** One can combine the above: e.g. free users see ads and have limited lives/energy (common in games), whereas a small subscription removes ads and gives unlimited play. For example, allow free users to do, say, 3 quizzes per day and watch an ad for more, whereas premium gets unlimited quizzes and no ads. This model encourages serious users to subscribe while keeping casual users engaged and monetized via ads.
- **Sponsorships & Scholarships:** Another creative angle is to work with government or foundations. For instance, a state education department might sponsor the app for all its schools (paying a fee to unlock premium for their students as part of a "digital initiative"). Or a telco could zero-rate the app's data (making it free to use on their network) as a selling point, in exchange for some branding. Such deals can bring in revenue or at least reduce costs for users, indirectly boosting adoption and retention.
- **Data and Insights (with caution):** At scale, anonymized learning data could be valuable (e.g. identifying national learning gaps, or which schools engage most). The app could provide insights reports to schools or education bodies for a fee. However, this must be done ethically and with privacy in mind (and likely isn't a primary revenue stream early on, but a possible ancillary one later).

It's worth noting that Malaysian consumers are **price-sensitive**, especially for education apps (many expect free content due to plenty of free resources around). Thus, a delicate balance is needed: perhaps starting with a mostly free model to build trust and user base, then introducing paid offerings that are clearly **value-adding (not paywalling basic education)**. A positive sign is that parents already invest in tuition and books; if the app can demonstrate it genuinely helps performance, parents may be willing to

pay a reasonable subscription or purchase. Moreover, the **social impact angle** (improving education) could attract public or corporate funding to subsidize it.

In summary, **freemium** seems the most viable route – hook users with free gamified learning, then monetize either through volume (ads, partnerships) or converting a fraction to paid premium. The key is to ensure any monetization doesn't undercut the app's educational mission or drive away users with heavy-handed paywalls.

6. Recommendations and Strategic Opportunities

Based on the research above, here are **key opportunities and gaps** identified, along with strategic suggestions for positioning a new gamified SPM learning app:

Opportunity Areas:

- **Engagement Gap:** Existing SPM resources often lack engaging delivery. Students explicitly desire more fun, game-like study options ⁴². A well-designed gamified app can fill this engagement gap, standing out by not just offering content but by *making the learning process enjoyable*. This could significantly increase student retention and habitual use, which current competitors struggle with (e.g., students drift away from pure video or note apps due to boredom).
- **Holistic Coverage with Gamification:** No single app currently combines comprehensive **multi-subject content** with deep gamification. JomStudy has content but relatively simple gamification; EduBijak has gamification but is new and narrow in content. There's a gap for an app that offers **all major subjects** content (like an SPM one-stop hub) *and* layers gamified features across them. Students would appreciate not having to juggle multiple apps.
- **Personalized Support:** Pain points about lack of feedback and help can be addressed by integrating AI tutors and community features. The app can position itself as a "24/7 study buddy" – something currently only partially offered by separate platforms. Doing this in a gamified context (e.g. earn rewards for asking good questions, helping others) can encourage active learning and peer support.
- **Inclusivity (Urban & Rural):** Because it's mobile-based and game-like, the app can reach students who might not have access to quality tuition. Particularly in rural or underfunded schools, this could be a game-changer. Position the app as *accessible to all*, possibly working offline for content (like i-Learn Ace's offline mode) and lightweight to accommodate areas with patchy internet. Gaining endorsements or tie-ups with Ministry initiatives could boost credibility and adoption in these segments.
- **Annual Renewing Market:** Every year brings a new batch of SPM candidates (~400k) ¹. The app that secures a good reputation could become a *standard tool* for each cohort, ensuring longevity. This also means marketing can reset each year with fresh students – an opportunity to continuously grow if early users advocate for it in their schools.

Strategic Positioning Suggestions:

1. **Start with High-Need Subjects or Features:** To gain traction, consider focusing initially on one or two subjects that students find most challenging or dull (common complaints are **History, Add Math, or Science**). By gamifying a tough subject exceptionally well (e.g. turning History facts into a trivia adventure or Add Math into a series of puzzle quests), the app can quickly demonstrate value. A targeted approach can create success stories ("this app helped me turn my Sejarah from D to A through its games") that fuel word-of-mouth. Once a core user base is established in one subject, expand to others.
2. **Leverage School & Peer Networks for Go-to-Market:** Teenagers are more likely to try an app their friends are using or a teacher recommends. A go-to-market plan should include outreach to **schools, teachers, and tuition centers**. For example, pilot the app in a few schools as an after-class activity tool or run inter-school quiz competitions using the app (with prizes) to generate buzz. Encourage students to invite friends via referral rewards (gamify the referral

process too – e.g. both the inviter and invitee get bonus points). Considering Malaysia's community nature, even **offline promotions** like school roadshows or partnerships with existing education fairs (facilitating live gamified quiz sessions) could convert skeptics into users.

3. **Balance Competition and Collaboration:** Ensure the gamification design rewards individual effort but doesn't alienate or overly stress students. For instance, include **collaborative game modes** (students team up to achieve a goal) alongside leaderboards. This way, students who aren't top performers still feel included and motivated (they contribute to team points, etc.). Given the high pressure culture around exams, the app's tone should be encouraging and fun – positioning itself as the student's companion rather than an added source of stress. The messaging can be: "Level up your knowledge at your own pace – learning can be a game!"
4. **Localized Content and Language:** Provide content in **dual languages** (BM and English) as appropriate, since SPM is bilingual (Science/Math have DLP options in English, other subjects in BM). Use localized examples, Malaysian contexts, and even slang or memes that Malaysian teens relate to, within the app's content and notifications. This will differentiate from generic global apps and create a sense of connection. For example, use a Merdeka theme quiz during August, or a Hari Raya holiday challenge – seasonal gamified events to keep engagement up. Local cultural relevance can be a USP (unique selling proposition) against foreign platforms.
5. **Build Credibility with Results:** Ultimately, parents and schools will support the app if it proves to **improve learning outcomes**. Plan to gather data and testimonials: e.g., after the first year, how did active users fare in SPM versus non-users? If gamification leads to more practice time, it should reflect in confidence and results. Highlight success stories in marketing – "X% of our users said the app made them study more regularly" or "500 students improved their trial exam grades after using the app." Even incorporate a feature for users to predict and track their grades, turning improvement into part of the game. By aligning the app's goals with actual exam success (not just engagement for its own sake), it will gain trust from the more skeptical stakeholders (parents, educators).
6. **Continuous Content Refresh and Improvement:** Use analytics to see which quizzes or topics students engage with or struggle with. Continuously update question banks (especially as syllabi or exam formats change), add new game features over time (to keep the app "fresh" for users who might use it over 1-2 years), and possibly introduce higher-level content (e.g. basic STPM or matriculation prep) to retain users after SPM. Essentially, don't stagnate – part of gamification is introducing new "levels" and challenges, which can be done by regularly adding content (like weekly challenge quizzes, or new past year questions as they become available). Announce these updates in-app to pull users back in (notifications about "New Chemistry Boss Battle available!").
7. **Monetization with User Empathy:** As earlier, plan a revenue model that doesn't turn users away. Perhaps launch with all features free in the first year to build a user base and gather feedback. Over time, introduce monetization gently – e.g. optional premium perks that **do not block core studying**. Given the competitive analysis, one strategy could be **premium cosmetic or convenience features** (for instance, special avatar skins or early access to new game levels for subscribers) while keeping educational content mostly free. This mirrors many game monetization strategies and might be better received than paywalling practice questions. Communicate clearly why paid features exist (to support app development, etc.) to users who are students – transparency can build goodwill.

Conclusion: A gamified SPM learning app has significant promise in Malaysia's evolving edtech scene. By addressing the *pain points of boredom, lack of motivation, and uneven access to help*, such an app can position itself as a must-have study companion for students. The market is ready – high device usage and positive attitudes toward online learning provide fertile ground, while current offerings leave room for a more dynamic, game-driven approach. Success will depend on executing gamification in a way that genuinely complements the SPM curriculum and on smartly navigating the educational ecosystem through partnerships and trust-building. With the right strategy, the app can not only capture a sizable

user base and achieve commercial sustainability, but also genuinely uplift students' learning experience and outcomes – turning the grind of SPM prep into a more motivating and effective journey ⁴¹ ⁴² .

Sources: The analysis above referenced official statistics, news reports, and education surveys, including The Star and Malay Mail for student numbers ¹ ⁵⁸ , UNICEF/MCMC for internet usage ⁴ , Project ID and Teach For Malaysia for student insights ⁴¹ ⁴² , and various app store and developer information for the competitive review ¹¹ ²³ . Each citation is indicated in-text in the format **【source†lines】** for verification.

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