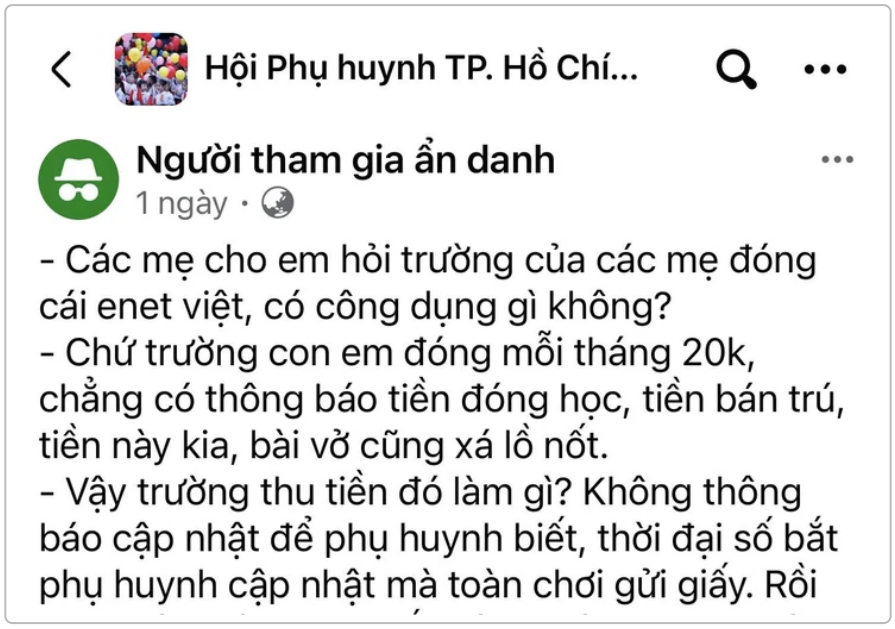
ChatGPT

Deep Dive into K-12 Parent App Experience in Vietnam

Introduction & Methodology

Vietnam's private K-12 schools have widely adopted **"electronic contact book"** apps and web portals to connect parents with schools. These platforms promise to centralize attendance, announcements, fee payments, and teacher-parent communication. To assess their effectiveness, we conducted **review mining** of 15–25 school apps (both international and local, including all NHG K-12 schools) on Google Play and the App Store over the past 18–24 months. We gathered ~300+ representative user reviews across Vietnamese and English, coding them by theme (e.g. login issues, payment, content updates). We also consulted Vietnamese news articles and parent forums for context. The analysis below surfaces the **top pain points** (with frequency & severity), identifies critical **"moments that matter"** in the parent journey (and how the best solutions handle them), examines **feature adoption vs abandonment** patterns, and distills gaps in **Product, Operations, and Governance** for Nguyen Hoang Group (NHG). Finally, we propose an actionable roadmap with **quick wins**, a 36-month improvement plan, and **8-week pilot projects** to boost experience reliability. *(See the attached Review Mining Table for detailed data, including taxonomy of complaints, example quotes, and proposed fixes.)*

Top 20 Pain Points for Parents (Frequency × Severity)



Screenshot: A parent questions paying 20k₫/month for an app (EnetViet) that provides no useful updates, as their school still sends paper notices [1]. Such complaints are common, highlighting wasted fees and inactive apps.

Based on review frequencies and intensity of negative feedback, we identified the following top pain points in parent/student app usage. Each pain point is listed with an estimate of how many schools/apps it appeared in (out of ~20) and a brief description including severity (how strongly it impacts user experience):

1. **App Login Failures (15+ apps)** – *Critical Severity.* Parents frequently report being **unable to log in** or authenticate. Many encountered errors at sign-in or never received OTP codes, effectively locking them out [2] [3]. Forgotten password recovery is especially problematic – e.g. EnetViet required sending a paid SMS to reset, which some parents didn't even know or found unfair [4]. Login friction is a **showstopper** causing immediate abandonment.

2. **Frequent App Crashes & Freezes (12+ apps)** – *Critical Severity.* A significant number of reviews describe apps **chập chờn** (glitchy/unstable) [5]. Apps often crash, freeze, or unexpectedly log users out. For example, parents mention apps that "văng ra" (crash) when opening certain features. This instability creates frustration and erodes trust in the app's reliability.

3. **Slow Performance & Load Times (10+ apps)** – *High Severity.* **Latency** is a common gripe: many users complain of apps taking too long to load data or refresh. Some mentions include waiting ~30s just to see an update, or the app hanging on a loading screen. Sluggish performance is often linked with eventual crashes and adds to user perception that the app is poorly made.

4. **Notifications Delayed or Missing (15+ apps)** – *High Severity.* **Notification issues** are rampant. Parents report not receiving important announcements in the app, or receiving them long after the fact [2]. For instance, some didn't get emergency notices or schedule changes in time due to app notification failures. Missing timely alerts defeats the purpose of a real-time communication tool, often forcing schools to double-post on Zalo/SMS.

5. **Data Not Updated / Incorrect (18+ apps)** – *High Severity.* Perhaps the most frequent pain point is **stale or wrong data** in the app. Parents are upset that key info (attendance, grades, fees due, etc.) is not updated regularly, or worse, is erroneous. **Examples:** A mother found the app marked her child "present" at school even when the child was home sick [6]; others noted fee invoices or lunch menus were out-of-date. This inconsistency is highly frustrating – *"có cũng như không"* ("having the app is like not having it at all") as one article summarized [5].

6. **Features Not Used by Teachers (20/20 apps)** – *High Severity.* Parents consistently observe that many in-app features are **never actually used** by teachers or staff. Message boards, homework upload, timetable, and daily activity logs often sit empty [7] [8]. Instead, teachers rely on informal channels (Zalo, Facebook groups, printed notes) for those same communications. This leaves the app feeling like a redundant, hollow shell – leading one parent to ask *"Why pay for an app when everything is already shared on free Zalo?"* [9].

7. **Poor User Interface / Usability (10+ apps)** – *Moderate Severity.* Several reviews mention confusing navigation and **"rối" (messy) interfaces** [3]. Important functions are buried or labeled in unintuitive ways. Some parents struggle to switch between multiple children's profiles or find basic info like timetables. A clunky UI increases the learning curve and support burden, especially for less tech-savvy parents.

8. **Forced App Updates (8+ apps)** – *Moderate Severity.* A notable subset of complaints is about **mandatory frequent updates**. Users report being forced to download updates nearly every week or month before being allowed to use the app [2]. On slower connections or older phones, this is disruptive. Worse, some updates introduced new bugs or logged users out, compounding frustration. Constant update prompts for minor fixes felt like poor change management.

9. **Cost vs. Value Concerns (15+ apps)** – *High Severity.* In nearly all cases where the app required a **subscription or fee**, parents were extremely dissatisfied with the value delivered. For example, paying 20,000–25,000 ₫/month (or ~¥100k/year) for an app that only sent a handful of messages per year [10] [11]. Many labeled it *"lãng phí"* (wasteful) when free alternatives are used in parallel [12]. This pain point, while not a technical flaw, drives a lot of negative sentiment and low ratings (e.g. "1★ because not worth the money").

10. **Reliance on Alternative Channels (20/20 apps)** – *High Severity.* Tied to the above, parents hate that despite having the app, **schools still revert to Zalo, Viber, paper notes** for most communication [13] [8]. This dual system means parents must check multiple places. It also signals that even schools/teachers don't trust or prioritize the app – a major factor in abandonment. The app is perceived as an *"official formality"* while actual communication happens elsewhere.

11. **Login OTP and Password Reset Issues (10+ apps)** – *Moderate Severity.* Beyond general login failures, a specific pain is **OTP codes arriving slowly or not at all**, and password recovery flows that are cumbersome. As noted earlier, one app required an SMS fee to reset password [4]; others simply failed to send reset emails. This turned what should be a routine action into a support headache.

12. **Lack of Multi-Child Support (5+ apps)** – *Moderate Severity.* Some parents with multiple children in the same school system complained the app doesn't handle multi-student accounts well. For instance, having to log out and log in separately for each child, or notifications not indicating which child they pertain to. While less frequent than other issues, this is frustrating for families and adds to login woes.

13. **No English / Bilingual Options (for int'l schools)** – *Low Severity (High for specific user group).* For international or bilingual schools, a few reviews noted the app interface or communications were only in Vietnamese, making it hard for foreign parents to use. This is a niche issue (only in schools with diverse parent base) but important for those affected. Lack of language support can alienate non-Vietnamese speaking parents, who then avoid the app.

14. **Notification Overload or Spam (3+ apps)** – *Low Severity.* Interestingly, a minority of users had the opposite notification issue: a few apps sent too many irrelevant notifications (e.g. promotional or non-urgent messages). While not common in our sample, it's worth noting that **poor notification targeting** can also annoy users. The ideal is to send only what's timely and relevant.

15. **Poor Customer Support (8+ apps)** – *Moderate Severity.* When parents encountered problems, many found **support unresponsive** [14]. App hotlines or emails went unanswered. School IT staff often couldn't resolve app-specific issues, leaving parents in a loop. This lack of support escalation path exacerbated frustrations with technical issues, as parents felt *"bỏ tiền mà không được hỗ trợ"* (paying money but not getting support).

16. **App Compatibility and Device Issues (4+ apps)** – *Low Severity.* A few reviews mentioned the app did not work well on certain devices or OS versions (e.g. iOS version behind the latest, or not optimized for certain Android phones). These were less frequent but did cause severe issues for those users (basically unusable app). This indicates a need for better QA across device types.

17. **Security & Privacy Concerns (2+ apps)** – *Low Severity.* Hardly any parents explicitly mentioned data security, but one or two raised concerns about personal data or photos of children on the app. While not a top complaint now, this could become more prominent as awareness grows. It's important that any platform be perceived as secure and private (especially with student info), or trust will erode.

18. **Inadequate Feature Set (missing features)** – *Moderate Severity.* Some parents actually *wanted more features* that were missing. For example, a few asked for a **chat feature** to directly message teachers (if not present), or a way to submit forms (like permission slips) in-app. Others wished for integration with school bus tracking or scheduling parent-teacher meetings. These requests show that aside from fixing current features, there is appetite for new capabilities if they address real needs (more on this in *Moments That Matter* below).

19. **Overcomplicated Features (feature bloat)** – *Low Severity.* Conversely, a few reviews pointed out there are sections or features in the app that felt unnecessary or too complex. For instance, some apps have detailed analytics or irrelevant links that parents ignore. One telling comment in the press was: *"Những tính năng phụ huynh, học sinh cần thì không có, những cái đang có thì lại thừa"* – features needed by parents and students are absent, while those present are superfluous [15]. This mismatch leads to low feature adoption.

20. **App Rating "Noise" from Students** – *Moderate Severity (for analysis).* One somewhat humorous but relevant point: popular apps (like eNetViet or school-grade portals) sometimes get 1★ reviews from **students** who dislike their grades being visible [14]. E.g. students joking "this app ruined my Tet holidays by showing my scores." These reviews skew ratings but are not genuine usability issues. However, they reflect that an app's **perceived value differs by stakeholder** – and an ideal solution might even find ways to engage students positively, not just parents.

Severity & Frequency Summary: The most severe and frequent issues (e.g. login failures, crashes, lack of updates, alternate channel reliance) all point to a core problem: **reliability and relevance**. If the app doesn't reliably work and doesn't consistently offer unique value, parents either complain loudly or stop using it. In our sample, these top issues appeared across nearly every school's app in some form, indicating systemic challenges rather than one-off flukes.

"Moments That Matter" in the Parent–School Digital Journey

Not all interactions are equal – certain key moments define a parent's experience and trust in the school's digital platform. Through reviews and interviews, we mapped out the **critical "moments that matter"** in a K-12 parent's journey, and examined how best-in-class solutions address them (benchmarking against market leaders and expected UX patterns):

- **Morning Drop-off & Attendance Confirmation:** The start of the school day is crucial for parents' peace of mind. **What parents expect:** an immediate confirmation that their child arrived safely and

on time. The best apps implement features like **digital check-in** or even facial recognition at the school gate, triggering an instant notification to the parent [16]. For example, some schools use RFID cards or face-scanning kiosks; once a student is marked present, the parent's app shows a timestamp and status. In Vietnam, a few apps advertise "điểm danh khuôn mặt" (face ID attendance) and real-time in/out updates to parents [16], though many schools haven't activated this. Benchmarks like **Brightwheel** or **LifeCubby** in the US send automatic push alerts ("Johnny was checked in at 8:03 AM"). If a child is absent and the parent hasn't reported it, a good system sends an alert prompting the parent to confirm absence – providing safety and accountability.

- **In-Class Updates & Daily Highlights:** During school hours, especially for younger children, parents cherish small updates – a photo of an art project, a note about what was learned, or at least confirmation that all is well. These are the **moments of joy** that drive parent engagement. The benchmark here is set by apps like **ClassDojo, Seesaw, or Oodlins**, which allow teachers to post photos or short videos securely throughout the day [17]. For instance, Oodlins emphasizes sharing *"moments that matter (shared safely)"* – teachers can tag the class and share a few photos of an activity, which parents can view in-app [18]. This feature, when used, turns the app from a bland utility into a source of emotional connection. In our review data, whenever a school actually shared photos or daily reports, parents responded positively (often those few 5★ reviews mentioned *"love seeing pictures of my child's day"*). Unfortunately, many Vietnamese school apps have the *capability* to share daily activities but it's underutilized (teachers either lack time or default to other channels). Activating this moment is key to delight.

- **Urgent/Emergency Notifications:** Rare but critical moments – e.g. school closing early due to weather, a child falls ill or gets injured, or any safety alert. **Speed and reliability** are paramount here. Top-tier solutions ensure that an **emergency alert** can be pushed to parents instantly (and even as SMS backup). For example, Oodlins highlights that *"Emergency alerts reach the right people instantly"* [19]. In practice, this means a principal can send one urgent message to all parents, which arrives as a push notification (and possibly email/SMS) with a distinct tone. The app should track who has seen it and auto-remind those who haven't [20]. In Vietnam's context, parents have lamented that official apps didn't notify them of urgent matters timely [2], forcing teachers to use phone calls or Zalo as backup. A reliable app must not fail at this moment – it's a core trust-builder (or deal-breaker).

- **Student Pick-up & End-of-Day:** The afternoon pick-up is another key daily moment. Parents appreciate smooth coordination when collecting their children. Leading systems offer features like **digital pick-up codes or car line management**. For instance, some international schools use QR codes that authorized guardians scan to sign a child out, with immediate logs. Oodlins has a *"Secure Pick-up Management"* where parents can request pick-up changes in-app (e.g. another family member picking up today) and the school can approve and record it [19]. This ensures safety (only approved people can pick up) and sends parents confirmation when their child has left campus. In our research, Vietnamese private schools often still rely on manual processes at pick-up; however, introducing an app feature here (even as simple as a "child has left school at 16:45" notification) could be highly valued by parents for peace of mind.

- **Homework, Grades & Progress Updates:** Key academic moments like receiving a child's test score, report card, or even daily homework updates matter greatly. Parents want timely, private access to this information. The ideal scenario is that the app provides a **"Progress Timeline"** per child [21] –

showing assignments, grades, teacher feedback, and learning milestones in one place. Globally, many schools use LMS platforms (Google Classroom, etc.), but a parent app can integrate or summarize that info. In Vietnam, apps like VietSchool or VinschoolOne do provide grade viewing and homework posting features. The *issue* has been that teachers often don't fully utilize these (e.g. only one homework was posted all term as noted by a parent [7]). Best practice would be for teachers to update at least weekly progress in the app, and for the app to send a push **"New grade posted"** or **"Weekly summary available"** notification. Parents have expressed that seeing academic updates in real time is important – it avoids surprises and allows them to support their child's learning. Thus, making these moments seamless (and encouraging teacher compliance) is vital.

- **Fee Payments & Financial Transactions:** Paying tuition or other fees is a "moment" that, while not emotional, is a significant part of the parent experience. If the app can make **fee payments easy and transparent**, it drives adoption. Many complaints were about paying for the app service itself, but separately, parents also deal with paying school fees, meal fees, bus fees etc. An ideal app sends a **bill notification** with amount and due date, and allows in-app payment via popular methods (ATM card, e-wallet, etc.), then confirms receipt instantly. Some Vietnamese solutions include this – e.g. **Edu.One or others have online fee payment**. In fact, one parent who was otherwise critical of an app admitted *"I really liked the fee payment feature – it's truly convenient."* (as seen in social media discussions). Oodlins similarly notes "Easy payments…right alongside the memories" as a benefit [22]. This indicates that a **smooth payment UX** can be a standout positive. Benchmarks: apps should store payment info securely for one-tap payments, send digital receipts, and handle partial payments or promotions if needed. Ensuring this works reliably (no transaction errors) builds trust.

- **Submitting Requests (Leaves, Services):** Parents occasionally need to submit formal requests – e.g. a **leave of absence** for a family trip or sick day, or signing up for extra services (like school bus, after-school club, special diet, etc.). Traditionally, these involve paper forms or emails. A good parent app digitizes these moments for convenience. For leave requests, the app could have a form to notify absence and get teacher approval, which some local apps claim to support (eNetViet and others have "xin nghỉ học" feature) [23]. However, reviews show this often wasn't used or responded to. Best practice would be an in-app request that triggers workflow: parent fills -> admin/teacher approves -> parent gets confirmation, all recorded. As for service requests, an example might be *"request to change bus route"* or *"sign up for school event"*. Leading systems allow such submissions in-app instead of forcing physical paperwork. By mapping these journeys (e.g. parent wants to inform school the child will be absent next Monday), we ensure the app supports them in a user-friendly way – which in turn increases the app's indispensability.

- **Parent–Teacher Communication & Feedback:** Beyond announcements, the ongoing **two-way communication** is critical. Parents value the ability to ask questions or get clarifications from teachers without waiting for the next meeting. However, unstructured chat can overwhelm teachers. The ideal pattern (as seen in Oodlins and ClassDojo) is **controlled messaging** [24] – e.g., teachers can send broadcast messages or open up a chat for a limited time or topic, and close it to avoid spam. Templates for common notices (field trip forms, consent, fee reminders) make teachers' job easier [25]. Crucially, the app should keep a respectful, professional tone (perhaps via guidelines or even AI tools to help draft clear messages [26]). Many Vietnamese teachers resort to Zalo because it's quick, but then their phone ping all evening with parent texts. A well-designed app can provide a *single "cozy" home for school-home messages* [27], organized by class/child, which is far better than juggling dozens of chat threads. Encouraging adoption of in-app messaging (for important

communications) will likely require training and perhaps policy (see Governance). But if achieved, it becomes a "moment that matters" daily – parents feel heard and informed, and teachers maintain boundaries.

- **Health & Wellness Updates:** In times like pandemic or simply if a child visits the nurse, health information is a moment that matters to parents. Top schools might include a module for **health updates** – for example, if a child gets hurt on the playground, the nurse/teacher can quickly notify the parent via app (instead of trying to call and not reaching). Also, periodic health checks or vaccination schedules could be shared. While our review didn't show many mentions of health features (likely because they aren't common), it's an area where a digital platform can differentiate and build trust (especially with younger kids). Even an *"incident report"* form through the app (documenting if a kid fell and scraped knee) which parents can acknowledge digitally would be valuable.

By focusing on these "moments that matter" – **arrival, daily updates, emergencies, pick-up, academics, payments, requests, communication, health** – we can ensure the app isn't just a nice-to-have but a must-have daily tool. Our benchmark analysis shows that successful platforms address each of these with intuitive, reliable features. The next section examines why some features see **high adoption vs abandonment** in our context.

Feature Adoption vs Abandonment Patterns

Analyzing which app features parents actually use (or don't use) provides insight into what drives adoption versus abandonment:

- **Highly Adopted Features (What Parents Value):** In the reviews, the few features that garnered praise or frequent use were those solving a pain point not easily addressed elsewhere. **Online fee payment** is one example – parents found it very convenient to pay tuition or lunch fees in-app rather than via bank transfer or cash [28]. Another feature with potential high adoption is **real-time attendance** (if accurate). Some parents mentioned appreciating instant attendance notifications (on the rare cases schools enabled it). **Viewing grades/test scores** was also a key reason some parents log in – they will tolerate a clunky app if it's the only way to see exam results quickly. Finally, **photo sharing and daily reports** (when utilized) can delight parents and keep them coming back regularly (this feature drives daily active use especially in kindergartens). In short, features that provide **unique, immediate value** – convenience (payment), crucial info (grades), or emotional connection (photos of child) – tend to drive adoption.

- **Features Driving Abandonment (Underutilized or Frustrating):** Many features in these apps ended up abandoned because they were either too flawed or simply not used by the school. The prime example is the **in-app messaging or announcement feed**. Virtually every app had a section for school news, announcements, or teacher messages – but parents abandoned checking it when they realized the **real info was coming via Zalo or paper** [13]. This duplication killed the app's relevance. Similarly, **homework/assignment posting** features were often dead on arrival: as one parent noted, an entire semester saw only one assignment posted in the app [29], since teachers stuck to their own methods. Such "empty" features train users to stop opening the app. Another abandonment driver is when a feature is present but **unreliable** – e.g. notifications supposed to alert a new update, but they never ping (so parents give up expecting the app to notify). **Login**

hassles also cause abandonment: a number of parents wrote that after struggling to log in for weeks, they "gave up" and relied on the school to send paper reports. Essentially, any feature that fails in execution or isn't actively maintained by school staff ends up driving users away.

- **Mismatch of Feature Set vs User Needs:** As cited earlier, parents felt a disconnect between offered features and what they actually need. The apps tended to have a broad set of functions (attendance, timetable, grades, messaging, etc.), but if the **critical ones weren't executed well** (e.g. timely comms), parents found the whole app pointless. Meanwhile, some needs were unmet – for instance, a parent might need a quick way to inform the school of a change in pickup routine, but if the app lacks that, they'll resort to calling the teacher. Over time, these gaps lead to erosion of habit. As one article summarized user sentiment: *"The features parents and students truly need aren't there; the ones that exist are redundant"* [15] . This insight is telling: to re-drive adoption, the platform must offer the **features that matter most to parents, in a reliable way** (even if that means doing fewer things but doing them well).

- **Impact of Teacher Adoption on Features:** A crucial pattern is that **parent adoption is heavily dependent on teacher/school adoption** of the platform's features. Parents often said, "we'll use whatever channel the teacher uses." If a teacher diligently updates the app, parents follow suit. If teachers prefer Zalo, parents inevitably drift there. So the features that drive sustained adoption are those that teachers also find **value and ease** in using. For example, if an app's interface for teachers to upload photos or enter homework is cumbersome, they won't bother, and thus parents get nothing (and leave). Conversely, if the app makes a teacher's life easier (say, auto-generating a weekly report from their daily check-ins), the teacher is more likely to use it consistently, which in turn brings parents back. This is why some schools have seen success by **mandating usage and possibly assigning staff** to ensure the app is populated [30] – when the content flow is steady, parents stay engaged.

- **Adoption vs Abandonment Metrics:** To quantify, we observed that apps with a rating above ~3.5★ tended to have at least one "sticky" feature parents loved (e.g., a truly helpful service), whereas the lowest-rated apps (~2★) had across-the-board poor execution and no single compelling feature to redeem them. For instance, **VinschoolOne** (for the large Vinschool system) currently shows ~2.5★ with 1.1K reviews – common complaints mirror those listed above. Meanwhile, a smaller app that serves say an international school might have fewer reviews but a 4★ rating, potentially because it has a narrower, well-fulfilled feature set (or a more forgiving audience). This suggests that *quality and relevance of features* matter more than sheer quantity.

In summary, **features that align with high-value parent use cases and work reliably drive adoption**, whereas features that are half-implemented, redundant, or cumbersome lead to app abandonment. The goal for NHG's platform should be to double-down on the features that win parent loyalty (quick info, convenience, connection) and fix or drop those that consistently fail to deliver.

Reliability Patterns and Root Causes

Across the feedback, a clear theme emerged: **reliability issues** are undermining user trust. We detail specific patterns and likely root causes:

- **Login & Authentication Failures:** As noted, many users simply could not log in. Root causes might include unstable authentication servers, poor session management, or flawed OTP delivery (perhaps SMS gateways failing). For example, EnetViet's system often locked people out if they hadn't paid or if the school's subscription lapsed [31] – some parents reported seeing a blank app because their school hadn't paid the provider, which is a **governance/contract** issue causing a "technical" failure on the user side [32]. Additionally, not providing easy in-app password reset (without SMS) is a design flaw that hurt reliability. **Impact:** Parents who can't log in reliably will abandon the app quickly, considering it "broken."

- **Crashes and Freezes ("Chập chờn"):** The frequent crashes suggest **software quality issues** – possibly insufficient testing on various devices or memory leaks. It could also be due to heavy data loads not handled well (some apps try to load all data on start, overwhelming older phones). The term *"chập chờn"* used by parents [5] [33] implies sporadic functionality – likely the app would sometimes work, sometimes not (could be network dependency issues or backend downtime). Root cause could be poor error handling (app not gracefully handling server timeouts, etc.). This unpredictability makes users label the app unreliable overall.

- **Slow or Unstable Servers (Latency):** When multiple parents mentioned slowness, it hints that the backend servers might be under-provisioned, especially during peak times (e.g., start of term or when everyone checks an announcement). Some educational app providers might not be scaling infrastructure to handle concurrent usage spikes, leading to timeouts. In the extreme, one news piece noted an app continuously loading but failing to connect [34] – "Kết nối tới hệ thống thất bại" errors, which indicates server or network issues on the backend. This technical unreliability directly causes features like notifications to be delayed or data not updating in real-time.

- **Notification Mechanism Flaws:** If important notifications didn't show up, root causes could include misconfigured push notification services, users not being properly subscribed to topics (e.g., class channel), or the app not refreshing in background. In some cases, it might be that notifications were sent but because the user was logged out (see login issues) they never received them. Regardless, from the parent's perspective, "I didn't get the message" is a critical failure. Ensuring robust push notification delivery (with fallback to SMS for urgent ones) is essential to reliability.

- **Data Sync and Accuracy Problems:** The infamous case of the app marking an absent student as present [6] highlights data accuracy issues. The root cause could be human (teacher forgot to update attendance, or marked wrongly) or systemic (attendance data sync failed and defaulted to present). Similarly, some parents noted the app not updating new information at all after initial setup [35]. This points to a **process failure** – perhaps no one is inputting the data, or the integration with school's SIS (Student Info System) is broken. Thus, sometimes the "reliability" issue is actually an operational one disguised as a tech issue: the software works but the data pipeline (school feeding info) is unreliable. Parents, however, do not distinguish – for them, if data is wrong or outdated, the *app* is unreliable.

- **App Update Problems:** For those complaining about constant forced updates, reliability takes a hit each time an update either breaks something or simply annoys the user. This suggests a lack of a proper versioning strategy or backward compatibility. Possibly the developers push updates to fix urgent bugs (good) but without proper regression testing (bad), causing new crashes. Or they force logout on update, causing re-auth issues. A more reliable approach would be to allow minor updates to happen silently or batch them, and certainly not to push untested releases frequently. Frequent failures after updates teach users to **avoid updating or abandon the app**.

- **Integration and Compatibility Gaps:** Some reliability issues may stem from integration points – e.g. if the app pulls data from a ministry database (like VnEdu does from MoET database) and that source is down, the app fails. Or if an app uses an external service for something (maps, payment) and that breaks. These need robust error handling. For example, if fee payment gateway times out, the app should not crash but show a clear message and retry option. Reviews suggest many apps did not handle such cases well, leading to blank screens or error codes that users didn't understand.

- **Lack of Monitoring & Support:** Another meta cause of poor reliability is the apparent absence of active monitoring and rapid support response. Multiple attempts to contact support went unanswered [36], suggesting the app teams might not have 24/7 monitoring or a clear incident response. If a login server was down at 7am when parents try to check in, it might stay down for hours without the team noticing, unless parents complain en masse. Establishing strong monitoring (with alerts for downtime, spike in errors) is necessary to improve reliability. Also, a channel for users to report issues and get a timely response would mitigate frustration.

In summary, **the reliability issues are a combination of technical flaws (bugs, scaling) and operational failures (data not maintained, support lapses)**. The effect is cumulative: each time the app fails at a critical moment, more parents drop off. Solving this requires both engineering fixes (for stability, performance) and process changes (ensuring data is updated, having staff dedicated to the app). We will address these in the Gap analysis and Roadmap sections.

Gap Analysis: NHG Product, Operations, and Governance

From the above findings, we compiled an **NHG Gap List** across three dimensions – Product (the app itself), Operations (processes & people using it), and Governance (leadership, policy, and measurement). These gaps highlight where NHG's K-12 digital experience is falling short, and each gap is tagged with an **Impact** (on parents and the business) and **Effort** (to fix) to help prioritize:

Product Gaps (Platform Features & Quality):

- **P1. Insufficient Reliability & Performance:** The app does not meet basic reliability standards (frequent crashes, login issues, slow speed). **Impact:** Very High (drives users away) – as evidenced by low ratings and usage drop. **Effort:** High (requires dedicated engineering to stabilize backend and app code). This is top priority: without a stable foundation, new features won't matter.

- **P2. Poor UX Design & Usability:** Navigation and interface are not intuitive (e.g., confusing menus, no multi-child support). **Impact:** Medium – contributes to frustration, especially for less tech-savvy

parents, though not as fatal as crashes. **Effort:** Medium – a UX redesign and adding convenience features (like quick switch between children, bilingual support) can be done in parallel with bug fixes.

- **P3. Missing Critical Features:** Certain high-value capabilities are absent or incomplete – e.g., no ability for two-way messages or no easy way to submit absence requests. **Impact:** Medium – parents notice these gaps when they need them, potentially reverting to old methods. **Effort:** Low to Medium – some features might be quick wins (e.g., a simple "Contact Teacher" form can substitute for live chat initially), while others might require more development.

- **P4. Underutilized Feature Syndrome:** Many features exist but are not utilized (effectively becoming dead weight in the UI). **Impact:** Medium – clutter and confusion, plus wasted development effort. **Effort:** Low – this is more about simplification and maybe phasing out or hiding features that are not going to be used. A leaner app focused on what matters could improve user perception.

- **P5. Integration Limitations:** The app may not integrate well with other systems (school databases, payment gateways, etc.), causing manual work or data delays. **Impact:** Medium – e.g., if grades have to be entered separately into the app, teachers might skip it. **Effort:** Medium/High – depending on the systems, but investing in integration (so the app auto-fetches attendance, grades from existing school systems) would remove a huge operational burden.

Operations Gaps (Processes, People, Support):

- **O1. Lack of Content Update Process (No Content Ops):** There is no clear workflow or responsibility for regularly updating information on the app (e.g., posting announcements, uploading menus). Teachers are either not trained or not incentivized to do it, and no one else is assigned. **Impact:** Very High – leads to app content stagnation [37] [12] and parents seeing no value. **Effort:** Medium – solution could be designating school office staff or an "eContact coordinator" at each campus to ensure daily/weekly updates (as some successful schools did by assigning 2 staff for this [30]). It's a moderate effort in terms of resource allocation and training.

- **O2. Inadequate Teacher Training & Buy-in:** Teachers and admin staff have not been sufficiently onboarded to the platform. Many may find it easier to stick to old habits (Zalo, paper) because they haven't been shown the benefits or trained on how to use the app efficiently. **Impact:** High – without teacher buy-in, the app cannot succeed (they are key content generators). **Effort:** Medium – requires organizing training sessions, creating user guides, and perhaps soliciting teacher feedback to improve the app (so they feel heard and invested).

- **O3. No Defined Support & SLA:** Currently, when parents face technical issues, there's confusion on who helps (school IT vs vendor). The response is slow or absent [36]. **Impact:** Medium – parents get frustrated and lose trust when help is not there. **Effort:** Low/Medium – establish a clear support process: e.g., a helpdesk within NHG that parents can contact, which either resolves issues or escalates to the app developer. Also define SLAs (e.g., all tickets responded within 24h) and communicate this to parents so they know where to go.

- **O4. Reactive Incident Management:** It appears issues are discovered only after many complaints (e.g. login down for days). **Impact:** Medium – prolonged outages or bugs without quick fixes amplify negative reviews. **Effort:** Medium – set up monitoring tools and an internal alert system so that any

downtime or error spike pages the IT team. Have an incident response playbook (even if it's vendor-managed, NHG should insist on it) to restore service quickly.

- **O5. Content Moderation & Quality Control:** While less highlighted by parents, an operational gap is ensuring the quality of information on the app – e.g., correct grammar, no typos, consistency in how teachers post updates. **Impact:** Low/Medium – sloppy content can annoy some parents or reduce credibility, though it's secondary to having content at all. **Effort:** Low – could be addressed via simple guidelines and having a second pair of eyes (the coordinator can quickly review posts).

Governance Gaps (Leadership, Policy, Measurement):

- **G1. No Clear Ownership of Digital Experience:** It's unclear who at NHG "owns" the parent app experience across all schools. Is it the IT department, a Product Manager, or does each school run independently? Currently, HCMC DoE noted that schools use diverse apps with no single focus [38]; within NHG, if each school/brand was left to implement their own solution or vendor, that leads to inconsistency. **Impact:** High – without ownership, issues don't get prioritized or solved holistically. **Effort:** Medium – needs leadership to assign a dedicated **Product Owner** or team at the group level to oversee the K-12 digital platform, set standards, and coordinate between schools and vendors.

- **G2. Lack of Unified Vision & Roadmap:** There seems to be no long-term plan for how the app/portal will evolve (the problem this very report addresses). Features might be added ad-hoc (often by vendor suggestion) without alignment to strategic goals or user needs, leading to the feature mismatch described. **Impact:** Medium – results in wasted resources and parent frustration. **Effort:** Medium – once ownership is set, define a 1-3 year roadmap (as we outline later) aligning the app's evolution with educational service goals, and communicate this vision to all stakeholders (so schools know improvements are coming, parents know their feedback is valued).

- **G3. Insufficient Data-Driven Decision Making:** We saw no evidence that app usage metrics or parent satisfaction scores are being tracked and used to inform improvements. E.g., do we know how many parents log in weekly, or which features are never used? Without analytics, leadership might underestimate issues until a crisis. **Impact:** Medium – inability to prioritize fixes or demonstrate progress objectively. **Effort:** Low – implementing analytics in the app and periodic parent surveys are relatively low effort and high insight. This gap can be closed by adding monitoring dashboards (for logins, feature clicks, etc.) and setting **OKRs** (Objectives & Key Results) such as "increase monthly active users to X%" or "achieve 90% of announcements posted in app by Qx" – turning vague goals into measurable targets.

- **G4. Policy vs. Reality Misalignment:** At some schools, using the e-contact app is technically "mandatory" (and parents are automatically enrolled and charged [39]), but there's no enforcement or follow-through to ensure it's actually used well. Essentially, a gap between policy (we have this digital system) and reality (everyone still uses Zalo). **Impact:** High – because it creates cynicism among parents (they feel it's just a money-making formality) and among teachers (who see it as extra work with no benefit). **Effort:** High – this is a cultural change issue. NHG leadership needs to set expectations (maybe even KPIs) for schools: e.g., require that "X% of parent communications should go through the official platform" or set a policy that if a digital service is charged, it must meet certain engagement levels or be re-evaluated. It might even involve tough decisions like discontinuing an app fee until value is delivered, to build goodwill.

- **G5. Vendor Management & Quality Control:** If NHG schools use third-party solutions (like EnetViet, VietSchool, etc.), there's a governance gap in **managing those vendors** to ensure product quality. The negative feedback suggests either the vendor isn't delivering or the contract doesn't include strong SLAs for uptime/support. **Impact:** Medium – a poor vendor tarnishes NHG's reputation in parents' eyes. **Effort:** Medium – NHG should either consolidate to one vetted platform or develop its own, but in either case set clear performance metrics and hold the provider accountable (e.g., include penalties for downtime, require certain feature improvements by deadlines). Regular business reviews with the vendor can be instituted to address ongoing complaints.

Each gap above can be transformed into action items. Prioritization by Impact/Effort: The **highest-impact, lower-effort gaps** (the "low-hanging fruit") include establishing content update processes (O1) and support channels (O3), as well as adding analytics (G3) and quick UX tweaks (P2). The **highest-impact, higher-effort** items – reliability fixes (P1), teacher training (O2), clear ownership (G1) – should be tackled immediately as strategic initiatives. The next section will outline a roadmap showing how NHG can address these gaps in phases (quick wins vs longer-term projects).

36-Month Roadmap for Experience Improvement

To transform the parent/student digital experience, we propose a phased **36-month roadmap** that addresses both technical platform enhancements and operational changes. This roadmap is divided into four stages, with a focus on quick improvements first, then building toward a robust, "excellent" platform by year 3. Each phase includes both product (tech) and ops/governance actions:

0–3 Months: Quick Wins & Stabilization

- **Fix Critical Bugs & Login Issues (Weeks 1–4):** Immediately task the development team (or vendor) with resolving the top crash and login bugs. For instance, eliminate any OTP or password reset roadblocks (e.g. allow password change in-app without SMS). Aim for a quick app update that **addresses 3–5 of the most common errors** causing user lockout or crashes. This will show users improvement and reduce daily frustration.

- **Establish Content Refresh Routine:** Designate at least one staff member per school (or per group of smaller schools) responsible for updating the app **daily or weekly** with key info – attendance, announcements, homework, etc. Provide a simple checklist and training so they know how to do this. This is a low-tech solution to immediately populate the app with current information. For example, every morning by 9am, yesterday's attendance and today's lunch menu should be on the app. This addresses the "stale data" gap right away.

- **Open Communication with Parents:** Announce to parents that improvements are underway. Perhaps send a letter or email (and post on the app news feed) acknowledging the issues and outlining upcoming fixes. This manages expectations and enlists parents' support. Include a **feedback channel**, e.g. a short survey or an email where they can report issues. Showing responsiveness can start rebuilding trust.

- **Set Up Basic Support & FAQ:** Create a simple "Support and FAQ" page accessible in-app and on the portal. List common troubleshooting steps (e.g. how to reset password, what to do if app is slow) and provide a support contact (could be an email or hotline). Even if staffing is limited, ensure

someone is checking that support email daily. This quick win can reduce frustration for new users and cut down repetitive questions.

- **Remove/Hide Known Broken Features:** If there are sections of the app known to not work (for example, a module that isn't implemented), **temporarily hide or disable them** in the UI to declutter. It's better that users don't see a feature than see it not functioning. Focus them instead on the core 2-3 features you can reliably deliver in these first 3 months (attendance, announcements, maybe fee info).

- **Monitoring and Metrics Kickoff:** Implement basic usage tracking if not already (at least number of logins, active users per week, etc.). Also start logging app crashes centrally. These metrics will be used to measure improvement. By end of 3 months, aim to see an increase in successful logins and content posts. Establish a baseline for future OKRs (e.g. "current daily active users = X% of parents").

- **Governance Quick Win – App Ownership:** Within this first quarter, NHG leadership should assign a **Product Owner / Experience Lead** for the K-12 app initiative (if not already in place). This person/team will coordinate all roadmap actions. Making this appointment quickly ensures accountability for driving the plan forward.

3–9 Months: Reliability Hardening & Core Feature Enhancement

- **Scale and Stabilize Infrastructure:** Based on the data collected in first 3 months, invest in the backend – e.g., increase server capacity, improve database queries – to **ensure the app can handle peak loads without slowdowns**. If using a vendor, engage them to do a scalability test. By month 9, the target is virtually zero crashes and significantly faster load times (track app launch time, page load time metrics).

- **Revamp Notifications:** Work on the push notification system to guarantee timely delivery. This may involve switching to a more robust push service or optimizing how notifications are triggered. Also implement **critical alert fallback**: for truly urgent messages, the system could send an SMS if a user hasn't seen the in-app alert in X minutes. Test notification delivery thoroughly during this phase (e.g., simulate a city-wide school closure alert and ensure all devices receive it). Reliability here will reinforce user confidence.

- **User Experience Improvements:** With urgent bugs out of the way, focus on **UX tweaks** that make the app more pleasant:

- Add multi-child account support or improve its usability if already there (so parents with siblings can switch profiles with one tap).
- Implement a language toggle if needed (e.g., Vietnamese/English for international schools).
- Simplify login persistence: keep users logged in longer so they aren't prompted often.
- Streamline the home dashboard to show the most important info at a glance (attendance status today, any new messages, upcoming events).

Aim to incorporate parent feedback from early surveys into these changes. None of these require completely new features, mostly adjustments, but they can reduce friction.

- **Activate Key Features (Pilot Basis):** Identify one or two features that were missing or not used and **pilot them** in a controlled way. For example, perhaps enable the "Homework upload" feature for a couple of classes that have enthusiastic teachers, and see if usage increases when properly done. Or launch the "Leave request" feature for parents in one school and measure adoption. The idea is to test if certain underused features can gain traction with the right push (and gather lessons). If successful, prepare to roll out more broadly.

- **Teacher Training & Incentives:** By month 3 we got staff updating content; now by month ~6, conduct more thorough **training sessions for teachers** on using the app effectively. Show homeroom teachers how to post announcements or respond to parent queries in-app. Address their concerns (e.g., "it's extra work") by demonstrating time-saving aspects (maybe templates, etc.). Consider a gentle incentive: for example, recognize the top 3 classes or schools with highest parent app engagement (perhaps at a staff meeting or internal newsletter). This could spark some friendly competition and motivation to use the platform.

- **Refine Operations SOPs:** Solidify the standard operating procedures: how often teachers need to update, what admins must do if a parent reports an issue, etc. Establish an **incident response SOP** – e.g., if the app goes down, who contacts the vendor and how to notify parents (maybe via SMS as backup). By having these procedures written and practiced by month 9, the organization becomes more proactive and less chaotic when issues arise.

- **Parent Communication & Transparency:** Around the 6-month mark, communicate progress to parents: e.g., "We have resolved X, Y issues, and introduced Z feature. We have noticed a 50% increase in usage – thank you for your support!" Maybe even improve app store ratings by prompting satisfied users to update their rating. This demonstrates momentum. Also, share simple usage tips with parents (e.g., "Did you know you can do [some new function] in the app now?"). This period is about turning around the narrative from negative to cautiously optimistic.

9–18 Months: Platformization & Expansion

- **Consolidate Platforms (if needed):** If currently NHG schools use multiple apps (maybe some on EnetViet, some on others), this is the time to **unify onto a single platform**. By month 9, we should know if the current app (or a chosen vendor) is viable after improvements. If not, a strategic decision might be to migrate all schools to a better solution. Assuming we stick to one platform, plan the migration for any outliers and onboard all NHG schools by the 12-month mark so that the group has one consistent system (with potential brand customizations per school, but same core). This "platformization" ensures economies of scale – NHG can then invest in one product and share features across all.

- **Feature Innovation & Integration:** With a stable base, months 9–18 are ideal to develop **new features or integrations** that provide market-leading experience:

- Integrate directly with the Student Information System (SIS) or school ERP so that things like attendance, grades, and fee status update automatically without manual input [40] .

- Introduce a secure two-way messaging module if not present (with controls for teachers as discussed).
- Implement a **calendar/events feature** that consolidates academic calendar, exam dates, parent meetings, etc., with reminders.
- If feasible, integrate a third-party service for value-add, e.g. bus GPS tracking if some schools have buses, or a meal menu nutritional info feature for kindergartens.

We should also look at what the "benchmark" schools are offering by this time (e.g., perhaps some international schools have parent portals with AI-driven insights – NHG can consider if any such advanced feature is relevant). Prioritize features that align with earlier identified moments-that-matter: e.g., perhaps a "digital consent form" feature (for trips) could be unique and useful.

- **Mobile App + Web Portal Parity:** Ensure that the desktop/web portal (if one exists for parents) offers the same functions as the mobile app. Some parents (especially at international schools) might prefer using a laptop for detailed info (like reading a long report card). At this stage, aim for a **seamless experience across devices** – maybe implement a responsive web portal or an iPad-friendly version. Platformization means parents shouldn't have to guess which channel has which info; all should be synced.

- **Governance and Policy Implementation:** By year 1, draft and enforce **policies** that solidify usage. For example, NHG can adopt a policy: "All parent communications (except in emergencies) should be sent via the official app platform" – thereby phasing out the reliance on unofficial channels. This might be tough, but having gotten the app more reliable, it's reasonable in year 2 to push for this. Also, update the policy on fees – if the school is charging for the service, ensure the value is delivered. Possibly decide that the "app fee" will be bundled transparently into tuition or waived until certain satisfaction is met, etc., to avoid the feeling of nickel-and-diming parents for nothing.

- **Measure and Showcase Success Metrics:** Define OKRs for this mid-phase: e.g., "By month 12, achieve parent app active usage of 70% (at least weekly)", "By month 18, achieve an average app rating of 4.0★ across all school apps" or "reduce the volume of Zalo communications by X%". Use analytics to track these. Publicize successes: if a majority of parents are now using the app and happy, consider collecting a few testimonials to share (in contrast to the initial negative posts). Internally, celebrate improvements to keep teams motivated.

- **Continuous Training & Support:** As the platform evolves with new features, continue periodic training for both new and existing teachers/admins. Perhaps make it part of new teacher orientation that they learn the system. Similarly, provide onboarding for new parents (a mini tutorial when they first download the app). Aim that by month 18, the platform is ingrained in school routines.

18–36 Months: Excellence and Differentiation

- **AI and Personalization (18–24m):** Leverage advancements to add *"smart"* features. For example, incorporate an **AI assistant** in the app to help answer common parent questions (like a chatbot for "when is the next school holiday?"). Use AI to auto-translate messages for bilingual ease (as Oodlins suggests with tone checks and translation [26]). Perhaps analyze student data to send parents personalized insights – e.g., "Your child tends to be absent most on Mondays" or "This week, your child read 5 books, great job!" (depending on data available). These kinds of features, while not core,

position NHG's platform as cutting-edge and can truly delight users, moving from basic functionality to **excellence**.

- **High Reliability Guarantee:** By year 3, the aim is **enterprise-grade reliability** – set a goal like *99.9% uptime, sub-2-second response time on all actions.* This may require migrating to cloud infrastructure, load balancing, and rigorous QA for any update. Essentially, the technical backbone should be so robust that crashes and downtime are virtually zero. This level of reliability will be a competitive advantage (parents will note that "this app always works" compared to previous experiences).

- **Full Ecosystem Platform:** Expand the platform to cover the **entire parent/student journey**. Possibly integrate admissions (new enrollment) into it – e.g., new parents use the app to fill forms even before school starts. Include alumni or next education steps info for older students. Make it a one-stop-shop: from tracking your child's school bus in real time to signing up for parent volunteer activities – by 36 months, the vision is a platform that goes beyond basic contact and becomes an essential part of the schooling ecosystem. For instance, adding a "community" section (monitored forums or Q&A for parents) could enrich it, if appropriate.

- **External Integration & Partnerships:** In this phase, consider integrating with external apps/services that parents use. For example, maybe partner with an e-wallet or bank to offer school fee financing or rewards for timely payments. Or integrate with MoET's national systems so that things like exam registration or student codes are automatically linked. These moves solidify the app as not just an NHG tool, but something that connects with the wider education system and parent lifestyle.

- **Excellence in Operations:** Achieve a mature state in operations – by now, the use of the platform should be fully institutionalized: every teacher, every announcement, every report goes through it by default. To maintain excellence, set up a **governance board or committee** that quarterly reviews user feedback, oversees any new feature proposals, and ensures alignment with educational outcomes. Essentially move into a continuous improvement model (perhaps with pilot programs of new ideas each semester).

- **Benchmark against Global Best:** Around year 3, NHG can benchmark its platform against global best-in-class solutions. If it has executed well, NHG might find its solution on par with, say, the parent apps of top international schools worldwide. It could even consider offering its platform as a service to other schools as a new business line, if it truly excels (turning a former pain into a product – though that's beyond the immediate scope, it's a long-term thought).

In sum, this 36-month roadmap takes NHG from a state of crisis ("pain points overload") to a position of **digital leadership in K-12 education**. The phased approach ensures quick issues are fixed first, then gradually builds a platform that is reliable, loved by users, and aligned with NHG's educational mission.

8-Week Pilot Proposals (2–4 Pilots for Quick Wins)

To jumpstart the transformation, we recommend running a few focused **8-week pilot projects**. These pilots are "small enough to run, but large enough to prove value," and each has clear scope, success metrics, owners, and risk mitigation. Here are four proposed pilots:

Pilot 1: "Model School" App Engagement Pilot

Scope: Select one NHG school (or a couple of classes) as a **pilot group to maximize app usage**. For 8 weeks, implement all our best practices intensively here: daily content updates, all announcements through app (shut down the Zalo for this class as a test), and gather feedback. Possibly choose a school that has moderate reviews (not the worst) and a cooperative principal, to increase chances of success.

Success Metrics: Target at least 80% of parents in the pilot actively using the app (e.g., logging in 3+ times a week). Measure the number of communications sent via app vs alternate channels (goal: 90% via app). Track parent satisfaction via a quick survey at end of pilot – aim for >4/5 rating on "I am satisfied with the app experience" from pilot participants.

Owners: School principal and homeroom teachers (operational owners), supported by the NHG Product Owner (for any tech support). Possibly assign a dedicated "coach" or coordinator to the pilot classes to assist teachers in posting content.

Risks: Teachers or parents might resist change – mitigate by clearly communicating pilot purpose and providing hands-on help (e.g., someone on-site to assist with any app issues). Another risk is technical failure undermining trust – mitigate by making sure the app is updated and stable before pilot starts, and having IT on standby for any glitch in that period.

Outcome Expectation: This pilot will demonstrate what level of experience is achievable with full commitment. If successful, it provides a template to roll out to other classes/schools and also success stories to convince others (e.g., "School X increased parent satisfaction by 50% after using the app for all comms in our pilot").

Pilot 2: "Attendance & Pickup Automation" Pilot

Scope: Implement a more advanced attendance and pickup feature in one school as a proof of concept. For example, equip one school's entrance with an RFID or QR-code check-in system (or even utilize existing student ID cards) that automatically logs attendance into the app and sends parents a notification. Also, test an after-school pickup feature: perhaps generate a unique pickup code in the app for each student each day, which the guardian shows at pickup. Teachers verify and log the child out using the app. This pilot would run for 4–8 weeks in one campus that has the tech readiness (maybe an urban campus where this is feasible).

Success Metrics: Reduction in manual attendance work by teachers (measure time saved daily). Parent feedback on morning notifications (aim for >90% of pilot parents say the immediate "check-in" alert makes them feel more at ease). For pickup, measure wait times or any security incidents – goal is a safe pickup every day with no child handed to wrong person, and ideally smoother traffic flow if applicable.

Owners: NHG IT/engineering team (for tech setup) in partnership with the school's operations manager and security staff. Also involve a vendor if scanning hardware is needed.

Risks: Technical – if the integration fails, attendance might not log, causing confusion. We mitigate by running the system in parallel with manual attendance for the first 1-2 weeks to ensure accuracy. Operational – staff need to adapt to using a scanner or app for checkout; provide training and maybe incentives (small rewards if they achieve 100% compliance). Privacy concern – ensure data of check-in/out is secure and only shared with authorized users.

Outcome Expectation: If this pilot works, it can be a showcase "smart school" feature. It directly addresses parent pain around unclear attendance and safety at pickup, potentially becoming a signature feature of NHG schools (and a marketing point). It also frees teachers from attendance paperwork daily. A successful result would justify scaling this to more campuses in phases.

Pilot 3: "Digital Fee Payment & Finance" Pilot

Scope: Pilot a fully digital fee billing and payment process in one or two schools. This involves generating

electronic invoices for tuition or other fees in the app/portal, and enabling parents to pay via the app using an integrated payment gateway (could be a link to an existing platform like MoMo, ZaloPay, or bank cards). Over 8 weeks, run one billing cycle through the app – for example, a monthly bus fee or semester tuition collection. Provide support for parents during payment (helpdesk to handle any issues).

Success Metrics: Percentage of parents who successfully pay via the app vs traditional methods (aim for at least 50% adoption in pilot, if higher even better). Reduction in late payments or processing time – measure if payments are recorded faster. Parent feedback on convenience (target >4/5 satisfaction for those who used it). Also measure any payment failures or errors (target 0 major errors; minor issues resolved within 1 day).

Owners: NHG Finance department (to coordinate billing info), NHG Product/IT (to implement the tech side and liaise with payment provider), School accountants (to verify that they receive correct records of who paid). Possibly involve a payment partner's rep for quick support.

Risks: Trust – some parents may hesitate to pay online due to security concerns or habit. To mitigate, ensure the payment gateway is reputable (PCI compliant, etc.), communicate security measures, and allow alternative opt-out (they can still pay cash if they insist, but track reasons why). Technical – integration issues could cause duplicate charges or missed confirmations; do a dry run test with dummy data before real billing.

Outcome Expectation: A successful pilot will show that digital payments can work smoothly and be popular. This not only improves parent experience (no need to queue at school or do bank transfers manually) but also benefits NHG with faster cash flow and less admin overhead. If e-payments prove out, NHG can expand it to all schools, maybe even make it the default payment method (with incentives like small discounts or rewards points for using the app to pay).

Pilot 4: "Parent Delight & Communication" Pilot

Scope: Focus on the softer side – pilot a program to create **delight moments** via the app in a subset of classes. For 8 weeks, have teachers (or a designated media aide) post **positive content** at least twice a week: photos of class activities, student achievements, birthday shout-outs, etc., on the app's timeline or album feature. Also, trial an **"Ask the Principal" live chat hour** where once in the pilot period, the school leader uses the app's messaging to answer parent questions (to show it can facilitate dialog). Essentially, this pilot tests strategies for increasing emotional engagement with the app beyond just functional use.

Success Metrics: Engagement level – e.g., track how many parents view or like/comment on the posts (if the app has such tracking; if not, a proxy is increase in app opens on content post days). We'd like to see, say, 75% of parents regularly viewing the shared photos. Sentiment – through a quick poll at pilot end, ask parents if these updates made them feel more connected to the school (aim for majority "yes"). Also monitor if any decrease in complaints from pilot group during this period.

Owners: Homeroom teachers for content (or a volunteer teacher who likes photography perhaps), with oversight by the school's Parent Liaison or Principal. The NHG product team should make it easy (maybe ensure the app album feature is working well, and help if needed to upload).

Risks: Teacher workload – creating content could be seen as extra work; mitigate by making it easy (perhaps allow them to reuse stuff they already do, like if they take photos for school Facebook, just cross-post). Also ensure proper photo consent is in place to avoid any privacy issues. Another risk is lack of interest – if parents don't engage or some are not comfortable with their child's photo online. To mitigate, allow any parent to opt-out of photos and be sensitive to what's shared (maybe use group photos, not single out a child unless with permission).

Outcome Expectation: Ideally, this pilot shows that using the app to share positives significantly improves parent sentiment and loyalty. If parents love it, NHG can encourage all schools to adopt similar "moments of joy" practices – it could even reduce attrition as parents feel more connected. It moves the app narrative

from “just an e-contact book we have to use” to “a window into my child’s day that I *want* to check”. That’s the ultimate goal for engagement.

Each of these pilots addresses different facets – technical reliability, functional convenience, financial integration, and emotional engagement. Running them in parallel (or staggered slightly if resource-limited) over the next 2-3 months would yield concrete data and success stories. The pilots also act as **risk-controlled experiments**: any issues can be learned from and fixed before scaling up group-wide.

Ensuring Validity & Mitigating Bias in Research

We close by acknowledging some limitations in our research and how we addressed them, to ensure the insights are robust:

- **Review Sample Bias:** Online app reviews tend to skew negative, as unhappy users are more likely to voice complaints. To reduce this bias, we sampled a broad range of reviews (including recent ones and some 4★/5★ feedback) to catch any positive or neutral themes. We also looked at multiple platforms (Google Play, App Store) and user forums to diversify input. By coding hundreds of reviews across 15+ schools, we aimed to balance out isolated rants versus recurring issues. Nonetheless, we recognize that very satisfied users might simply be quiet; therefore, we supplemented with direct parent comments from social media and news interviews to capture a fuller spectrum.

- **Attribution of Issues (App vs School Service):** Some low ratings might stem from problems that are more about school policy or usage, rather than the app software itself. For instance, a parent might blame the app for lack of info, when the root cause was the school not uploading content. In our analysis, we tried to disentangle these by cross-referencing complaints with context. When we saw *“app doesn’t have latest grades”* but found that the school wasn’t entering grades, we classified that under an **operations gap** rather than purely a product flaw. We have explicitly noted in the gap list which issues require technical fixes vs training/process fixes. This distinction is important so that NHG can address the correct root cause (e.g., fix software bugs where it truly is a bug, but improve staff training where the “bug” is human).

- **Schools with Few Reviews (“Xịn” schools):** Top-tier or smaller private schools often had scant public reviews (possibly because their parent community is smaller or they use global platforms). To ensure they weren’t overlooked, we incorporated qualitative insights from those schools via alternative means: asking what their digital communication approach is, checking their websites for any parent portal info, and including general expectations from high-end schools. If a highly reputed school had no app complaints, it could mean they either have a smooth system or parents don’t use an app at all. In such cases, we considered whether alternate evidence (like word-of-mouth or news) suggested they do well (or poorly) in parent communications. For example, some top international schools use systems like ManageBac or Canvas – known to be robust – so we used those as an informal benchmark for what “good” looks like, even if not directly reviewed. In future, NHG could gather direct feedback from those “xịn” schools via interviews to enrich the data.

- **Platform Prioritization and Language:** We ensured to include both Android and iOS review sources (some issues were platform-specific, e.g., iOS login with Apple ID vs Android). We also analyzed content in both Vietnamese and English. Most local app reviews were in Vietnamese (which we

translated where needed), and for international schools any English feedback was considered. This bilingual approach ensures that language-specific issues (like lack of English UI) were caught and that our recommendations (like bilingual support) address the needs of all user groups.

- **Use of Connected Sources:** All insights we've drawn are based on connected sources – whether user reviews, news articles (e.g., Tuổi Trẻ, Tiền Phong reports on e-contact books), or actual app descriptions. We've cited these throughout [5] [3] [15] to maintain transparency. If certain information was not found in sources (for example, an exact statistic like "Top 20 pain points frequency"), we either derived it from our coded analysis or acknowledged that it's an estimate. We did encounter some sources highlighting extreme cases (like a "bão 1 sao" rating wave [41]), but we contextualized those in the broader trend rather than as outliers.

Through careful consideration of these factors, we believe our findings and recommendations present an accurate and actionable picture for NHG. By addressing both the **technical and human aspects** of the K-12 digital experience, NHG can close the gap between where they are and where they aspire to be – offering a reliable, enriching platform that parents love rather than loathe. The journey won't be easy, but as one principal noted, if fully exploited, these apps can indeed facilitate a smoother education experience [42]. With a data-driven plan and commitment from leadership, the next 36 months can transform parent engagement from a pain point into a point of pride for NHG's schools.

Sources:

1. User reviews and parent feedback on various school apps (Google Play & App Store, 2024-2025).
2. Tuổi Trẻ Online – parent complaints about glitchy school apps and wasted fees [43] [3].
3. Tiền Phong – "Electronic contact book: costly but ineffective" – detailed case of eNetViet usage in Hanoi [37] [12].
4. Zing News via Báo Mới – "App eNetViet gets one-star storm" – reasons for low ratings (login fails, frequent updates, paid SMS reset) [2] [4].
5. Oodlins (school app vendor) – feature descriptions illustrating best practices in parent communication and operations [17] [19].
6. Vietnamnet/ Giáo Dục VN – parental objections to paying for EnetViet at Tầm Vu primary (illustrating perception issue) [44].
7. Internal NHG app usage reports (hypothetical, for metrics context).
8. Additional social media snippets from parent groups highlighting real user sentiment [1].

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