

ENHANCING THE MEDICAL EDUCATION EXPERIENCE:

HOW MEDSTUDY ELEVATED THEIR
MOBILE APP WITH HERODEVS



CLIENT PROFILE

MedStudy is a specialized provider of medical education products serving physicians and medical students. As a small, privately-owned company, MedStudy delivers high-quality educational resources that help medical professionals excel in their careers and certification processes. Their comprehensive suite of products includes question-and-answer systems, core educational content, and multimedia learning resources through video and audio formats.

The MedStudy logo is displayed in a light blue square. The word "MedStudy" is written in a sans-serif font, with "Med" in black and "Study" in a teal color.

"Our mission is to provide the most effective, efficient, and engaging study resources for physicians at all stages of their careers. Our digital products need to work seamlessly with how doctors actually study—often on the go and between patient visits."

— MedStudy

TECHNICAL CHALLENGE

MOBILE APP LIMITATIONS

Two years prior to engaging with HeroDevs, MedStudy had launched a mobile application to extend their educational platform's reach, allowing customers to access most of their products on iOS and Android devices. The app was developed using Ionic, which enabled rapid development leveraging their team's existing Angular expertise.

However, as the app gained traction, MedStudy encountered significant limitations with their video and audio player implementation:

- » **Missing native functionality:** The app lacked support for Picture-in-Picture mode, a critical feature for multitasking medical professionals
- » **No CarPlay integration:** Users couldn't seamlessly continue their audio learning while driving
- » **Limited background playback capabilities:** The existing player didn't properly support studying while using other apps

These limitations were increasingly frustrating for their physician users, who often study in short bursts throughout their demanding schedules.

"Our customers—doctors and medical students—have incredibly demanding schedules. They need to make use of every available moment for study, whether that's reviewing content while charting, listening to lectures during their commute, or watching technique videos while referencing other materials. Our existing app wasn't supporting these use cases as effectively as we needed." — MedStudy

DEVELOPMENT DILEMMA

MedStudy's small development team faced a significant challenge. While their expertise in Angular and Ionic had served them well for the initial app development, implementing these advanced media features would require native mobile development expertise that wasn't present in their current team.

The company faced a critical decision:

- 1 **Invest in native development skills:** This would require substantial time for training or hiring specialized developers.
- 2 **Scale back feature expectations:** This would disappoint users and limit the effectiveness of their educational platform.
- 3 **Find expert assistance:** This would require finding a partner with both native capabilities and the ability to integrate with their existing codebase.

For a small team already maintaining multiple digital products, the first two options presented significant risks to their business objectives and development timeline.

"We knew what our users needed, but building native mobile capabilities in-house wasn't feasible with our current team size and ongoing product commitments. We needed specialized expertise that could extend our team's capabilities without disrupting our existing development workflow." — MedStudy

STRATEGIC SOLUTION

HERODEVS PRO SERVICES

MedStudy engaged HeroDevs' Pro Services to address their technical challenges. After assessing their needs, HeroDevs immediately identified that a Capacitor plugin approach would be the optimal solution—providing native functionality while preserving MedStudy's investment in their existing Ionic application.

The HeroDevs team proposed a comprehensive approach that included:

- 1 **Custom Capacitor plugin development:** Creating specialized plugins to enable Picture-in-Picture, CarPlay integration, and enhanced background playback.
- 1 **Application architecture updates:** Modifying the existing app to properly utilize the new Capacitor plugins.
- 1 **Cross-platform implementation:** Ensuring consistent functionality across both iOS and Android platforms.

This strategy allowed MedStudy to enhance their app with native capabilities without requiring their team to develop native expertise or rebuild the application from scratch.

"What impressed us about the HeroDevs approach was how quickly they identified the right technical solution and how seamlessly they integrated with our existing development processes. They didn't just solve our immediate problem—they implemented the solution in a way that our team could maintain going forward." — MedStudy

COLLABORATIVE IMPLEMENTATION

The implementation process exemplified effective collaboration between external expertise and an internal team. Eduardo from HeroDevs worked as a direct extension of MedStudy's development team:

- » **Deep requirements gathering:** Eduardo collaborated closely with both MedStudy's lead developer and product owner to thoroughly understand both technical constraints and business objectives.
- » **Integrated workflow:** Communication flowed efficiently through the team's existing Slack channels and Jira project management system.
- » **GitHub pull requests:** Code contributions were submitted through GitHub pull requests, enabling code review and knowledge transfer.
- » **Seamless integration:** The process felt like a natural extension of MedStudy's existing development workflow rather than an external project.

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TECHNICAL IMPLEMENTATION

The Capacitor plugin implementation provided a bridge between the existing Ionic framework and native device capabilities. Here's a simplified example of how the plugin was integrated:

```
// Example of the Capacitor Video Player plugin integration
import { Component, inject, signal } from '@angular/core';
import { MediaPlayer } from '@eduardoroth/media-player';
import {
  IonApp,
  IonButton,
  IonCard,
  IonContent,
  IonHeader,
  IonTitle,
  IonToolbar,
  ToastController,
} from '@ionic/angular/standalone';
```


WHY THIS MATTERS

BRIDGING EXPERTISE GAPS IN TECHNICAL TEAMS

The Reality of Specialized Development Needs

MedStudy's experience highlights a common challenge facing companies with lean development teams—the need to implement specialized functionality without expanding permanent headcount or diverting focus from core competencies.

"Every technology leader at a small or mid-sized company faces this dilemma regularly," reflects MedStudy. "You need specific technical capabilities for a critical feature, but building that expertise in-house isn't justified for a single project. The traditional options—hiring, training, or compromising on features—all come with significant downsides."

This challenge is particularly acute for companies in specialized domains like medical education, where the core development team needs deep domain knowledge but may occasionally require specialized technical expertise for specific features.

A New Model for Extending Team Capabilities

MedStudy's partnership with HeroDevs represents a more effective approach to addressing specialized development needs:

Capability extension rather than replacement: "What made the HeroDevs engagement different was that they didn't just take over a project—they extended our team's capabilities while preserving our workflows and processes," explains MedStudy. "We maintained control and ownership while gaining the exact expertise we needed."

Knowledge transfer alongside implementation: The collaborative development approach ensured that MedStudy's team gained valuable insights about the new technologies. "We didn't just get a finished feature—we gained a deeper understanding of Capacitor and native integration approaches that will inform our development decisions going forward," notes MedStudy.

Focused expertise at the right time: The engagement model provided exactly the expertise needed for the specific challenge without the overhead of permanent hiring. "It's like having a specialist doctor consult on a specific case—you get exactly the expertise you need when you need it," says MedStudy.

Enabling Innovation Within Constraints

For many companies with limited development resources, feature trade-offs are often considered inevitable. MedStudy's experience demonstrates a different possibility:

"What we learned from this project is that we don't have to choose between maintaining our existing products and innovating with new features," reflects MedStudy. "With the right partner providing targeted expertise, we can do both—keeping our platform stable while still delivering the advanced capabilities our users need."

This insight has broader implications for how small and mid-sized companies approach development planning:

Rethinking the build vs. buy equation: Beyond the traditional build vs. buy decision, there's a third option—targeted collaboration that combines internal knowledge with external expertise.

Maintaining momentum while adding capabilities: Companies can continue their product evolution without the disruption of major hiring initiatives or extensive training programs.

Preserving team culture and processes: External expertise can integrate with existing workflows rather than requiring teams to adapt to new methodologies.

"Our partnership with HeroDevs has fundamentally changed how we think about development resources," concludes MedStudy. "We now see our team's capabilities as extendable through the right partnerships, allowing us to be more ambitious in our product roadmap while maintaining the lean, focused team that understands our unique market."

For companies facing the tension between limited development resources and demanding feature requirements, MedStudy's approach offers a valuable blueprint for moving forward without compromise.

"Working with HeroDevs allowed us to deliver advanced native mobile features that significantly enhanced our educational platform, without disrupting our development workflows or requiring extensive team expansion. Their Pro Services model gave us exactly the expertise we needed, exactly when we needed it." — MedStudy

For more information about MedStudy, visit www.medstudy.com or download their applications on the iOS App Store and Google Play Store.

This approach allowed MedStudy to leverage native capabilities while maintaining their existing Ionic application architecture. The plugin handled platform-specific implementations (iOS and Android) while presenting a consistent API to the application code.

This collaborative approach ensured that the technical solution not only met the immediate requirements but also aligned with MedStudy's long-term development practices and capabilities.

"Eduardo became an extension of our team almost immediately. He understood both our technical environment and our business goals, communicated clearly throughout the process, and delivered code that matched our standards and practices. It was the smoothest external collaboration we've experienced."
— MedStudy

RESULTS

ENHANCED LEARNING EXPERIENCE

The engagement with HeroDevs resulted in successful releases of updated iOS and Android applications featuring the enhanced video and audio player. The new capabilities transformed how medical professionals could engage with MedStudy's educational content:

- » **Multitasking-friendly learning:** Picture-in-Picture support allowed users to watch video content while referencing other materials or taking notes.
- » **Commute-time productivity:** CarPlay integration enabled seamless audio learning during travel time.
- » **Uninterrupted learning flows:** Enhanced background playback capabilities let users switch between apps without disrupting their educational content.

These improvements directly addressed the way medical professionals actually study—in small pockets of time between other responsibilities—making MedStudy's platform significantly more valuable to their users.

"The feedback from our users has been overwhelmingly positive. Doctors particularly appreciate being able to continue listening to lectures during their commute and watching procedural videos while reviewing related content. These capabilities have meaningfully improved how our customers can fit education into their demanding schedules." — MedStudy