Programming an ATtiny+Homemade Arduino Shield:

The shift from the ATmega 328 to the ATtiny 85 not only highlights a significant cost-saving measure but also underlines the importance of selecting the right microcontroller for specific project requirements. The ATtiny 85 provides enough functionality for smaller projects, demonstrating that cost-effective solutions can often yield satisfactory results without compromising performance.

The process of programming the ATtiny 85 using the Arduino IDE emphasizes the flexibility and accessibility of Arduino's ecosystem. This method allows users to leverage their existing knowledge of Arduino programming and hardware while exploring more compact microcontrollers. It serves as a bridge for those transitioning from traditional Arduino boards to smaller, more specialized microcontrollers, thus expanding their range of projects.

Acknowledging the ATtiny 85's limitations, especially regarding certain functions like SPI, is vital for successful project planning. This insight encourages users to conduct thorough research before starting their projects and to be aware of their microcontroller's capabilities and restrictions. Understanding these limitations can help in making informed decisions about component selection and project design.