



Tom Gallagher, NY2RF — tgallagher@arri.org
ARRL Chief Executive Officer

Lessons of Grace

“March 1, 2017 will remain a memorable date for Shui Se Phoe. On that day, she earned her Technician class license.”

Every ham has a story. Shui Se is no exception. She’s a seventh grader at Hartford’s Grace Academy for girls in grades 5-8. Born in a refugee camp in Thailand, Shui Se, along with her two siblings and her mother, belongs to the Burmese *Karen* ethnic group, which has been targeted for violence, forced labor, and genocide by the Myanmar regime. They fled to the US to escape, and resettled in Hartford. Shui Se likes volleyball, math, and cooking club. She diplomatically will not name a favorite teacher: “I like all my teachers.” Despite her full measure of activities, she still finds time to be an exceptional student. Now she’s also KC1HCK.

Shui Se participated in an experimental program ARRL is developing to bring electronics and Amateur Radio to elementary schoolers as an enrichment experience, rather than as a formal academic program. Keeping it in the school but outside of the classroom makes it less like school and more like recess. Using a curriculum written by former ARRL staffer Nathan McCray, K9CPO, we continuously refined it through flexible experimental method — teaching, observing, editing, and refining. Running the program, as one wag said, “constantly through the rock polisher.” The approach combines whiteboard work ($I = E / R$) together with hands-on experience (build a code practice oscillator) and fun activities (HF operating and foxhunts). The program is not specifically targeted to licensing — but it can lead, as in Shui Se’s example, to a license, because most of its teaching modules use radio and RF as their grist. Getting licensed involves much brute memorization — rules and regulations, etc. Seventh graders in a demanding school already have enough memory work. The licensing exam imposes an additional burden on busy young people. Sometimes it’s advised not to push the issue: let the natural curiosity of motivated young people direct them.

We believe that what we are learning from this pilot program will inform much of our effort going forward. Many hands helped to develop the pilot, and success has many fathers. In this case, some were volunteers and ARRL staffers working entirely on their own time.

First, however, there is the school. Grace Academy is the creation of former Wall Streeter Matt Fitzsimons and others. At Grace, the school day begins at 7:30 AM and extends to 5:30 PM. Grace operates 11 months of the year. The school is an independent (private) institution where no student pays tuition. It’s faith-based, but non-sectarian. It features the Jesuit education model: development of critical thinking skills, critical writing, exposure to world languages, the liberal arts and sciences, mature engagement in society, and the fostering of a desire for lifelong learning. There are 44 such schools in the US, and two in Canada. Last fall, Grace *approached us* about providing an after-class program in radio. So, lesson number one: select a

school that is open to Amateur Radio. That typically means an independent, magnet, or charter school.

Then there is the matter of instructors. Anecdotal experience shows that peer-to-peer learning — where instructor and student are close in age — proves far more effective than when a large age disparity exists. In our case, Chet Bacon, KA1VT, a former staffer, ham radio mentor, and a talent scout, recruited two Southington high schoolers, Matt Shea, AA1CT, and Austin Mongillo, N1UIS, as youth instructors. Both experienced hams with talents beyond their years, they taught the material under ARRL staffer Mike Corey’s, KI1U, supervision. The second lesson: students learn better when they have a natural rapport with their instructors. The Tuesday afternoon sessions extended 14 weeks and culminated in administering the Technician class license to five students. Everybody knew that Shui Se would pass because she had “her nose buried in the licensing manual for 2 weeks.” The instructors spotted it right away.

Lesson three is gauging, and responding appropriately to, the natural motivation of the student. Motivated students are eager to achieve, and more often — but not always — easier to instruct. That eagerness is reflected in their grades, their classroom performance, and most of all their willingness to seek out progressive challenges. Passing a structured examination and earning a license can represent a major milestone for a young person — a nationally recognized accomplishment. For seventh-grade girls, it can be empowering. In earning that recognition, the skills acquired beyond mastery of the subject — including acquiring additional test-prep and test-taking experience — will prove useful throughout life. But the motivated student is probably more likely to advance beyond Technician if her peers and seniors continuously celebrate, encourage, and support the achievement. I hear too often from newly minted Technicians, “I’m told ‘Congratulations, welcome to the club, but you don’t really know squat.’” Reminding a newcomer just where they stand in your self-absorbed view of the larger food chain will ensure you never see him or her again.

I hope that we can propagate the lessons of Grace Academy’s pilot, curriculum, supportive schools, peer instruction, and positive reinforcement. Seek out similar situations. It involves a great deal of work, and no small amount of luck, but it represents solid investment in the next generation.

And to you, Shui Se Phoe, KC1HCK, I say, “Long may you wave.”

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