

BYU Senior Gets More Than Anticipated From Research

Erin Nasson, began doing research at Brigham Young University to make her resume more attractive to Physician's Assistant schools. But the course she took through research led her in another direction.



Nasson on campus: The recent graduate kept extra hours at BYU completing a research project she says helped her get into a Masters program, and a good job.

“PA school is getting very, very competitive, so I wanted to do extra things that made me stand out,” says the recent graduate. After some of her grades came up short of outstanding, the senior wanted to do something that would prove to other schools she was a disciplined student and a hard worker. “I thought doing research would show that. A way to make me shine, I guess.”

Nasson heard about mentored learning scholarships from her Exercise Science professor, Dr. Iain Hunter. After taking a biomechanics course from him, and having her proposal accepted by ORCA, she was able to perform research alongside him this past winter. She says her mentor didn't just let her coast through the project, but put her in charge of part of the testing, making her responsible for the study's outcome.

The Results

Earlier studies performed at BYU have found that competitive runners fall into a natural, economical stride when running on level ground. Nasson and her research partners wanted to find out if runners take the most economical stride when running uphill—not lengthening or shortening their stride too much while maintaining adequate oxygen intake to get over the hill and have enough left over to keep running.

Nasson, Hunter and others studied the running stride of 13 female cross-country athletes, comparing their steps with the beat of a metronome and measuring their oxygen intake, among other evaluations. The women first ran on a level surface, then on a six percent upgrade.

“We found that athletes do fall into their natural stride length while running uphill,” says Nasson. She also notes that the experienced runners can take up a natural stride without much difficulty, saving time and breath. Novice runners, on the other hand, usually have to learn to adjust their stride and oxygen intake during ascents. A natural rhythm, she says, comes with time and experience.

Future studies will help determine how runners and other athletes can compete at even more economical levels to produce an edge over their opponents.

Nasson is submitting an abstract on the study to the American College of Sports Medicine for review. She will also present her research at the ACSM regional conference in November.

The Other Results

“This research has made the path of where I’m going,” says Nasson. Her course of study has recently been diverted from PA school to a Masters program in Exercise Physiology at BYU. She’ll begin the program in the fall with an emphasis in biomechanics.

The new change in direction has even led her to a new job working in the biokinetics department at the Utah Baseball Academy. She says she was in the right place at the right time, doing research in the lab when Hunter introduced her to representatives of the Academy. She expressed a desire to work in the industry, and her mentor recommended her after working closely with her on the project. As a result, the Academy will be paying for Nasson’s graduate education.

“I love what I do, and I’m excited about it,” she says about the research and her future. “It’s nothing I would have ever expected.

She credits Hunter with the opportunities she has had this year. She says his guidance was instrumental in helping her perform the research. “He showed me how to use the equipment, and he pretty much just let me go with it, setting up the training with the girls,” she says. “He’s always encouraging and really positive.”

The early mornings and additional hours didn’t deter Nasson from completing her assignment, which she says has been very rewarding. From what began as a resume builder has grown into an experience that has opened up doors for her. It is also something she wants to keep doing while in school and in her career.

She admits that she was one of those people who thought research was for “boring people,” but soon learned differently. She advises keeping an open mind, asking lots of questions and having fun when doing research. “You never know what’s going to happen.”

Though she feels like her efforts were only a small part of the overall research, she most likely doesn’t realize the extent to which she and her fellow students contributed in supporting faculty and the university with their work outside of the classroom.

Just as she didn’t realize what a mentored learning experience could do for her.

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