

How Does the Implementation of a Customized Training Program Tailored to the Individual Athlete's Abilities and Goals Impact the Performance and Confidence of a Cross-Country Team Over a Season?

Christopher Childs
Florida Atlantic University
A.D. Henderson University School/FAU High School

Abstract

This action research study investigates the impact of customized training programs tailored to individual athletes' abilities and goals on the performance and confidence of a high school cross-country team. With the increasing competitiveness in sports, the need for innovative approaches to enhance athletic performance is essential. Traditional training methods may no longer suffice in preparing athletes for elite levels. Recognizing and addressing each athlete's strengths and weaknesses, individualized training programs aim to optimize performance potential while fostering a culture of excellence within the team. The study explores how such personalized approaches can contribute to injury prevention, athlete development, and overall team success. Contextual factors such as academic demands and the impact of the coaching methods and team culture are considered. Through this research, the coach seeks to refine coaching strategies and rebuild a culture of dedication within the cross-country team, aiming for improved performance and achieving collective goals.

Keywords: customized training programs, athletic performance, individualized coaching, cross-country team

Introduction

Competitive sports have been constantly evolving, and the bar of talent has increased, making it harder for an athlete to be considered elite (i.e., athletes who are typically at the top of their field). This demands innovative approaches to enhance athletic performance and achieve the collective goals of individuals and their teams. Being a former collegiate soccer player and coach for the past 25 years, I have noticed a shift in the training of youth competitive sports. Simply going to practice is no longer enough if you want to make it to the next level. An athlete needs to be training extra on their own and in the off-season.

Drawing from my experience, this is my seventh season as a high school cross-country coach. When the season started in August, I became aware of the different levels of experience of each runner. This got me thinking: How will I coach these student-athletes to be successful? This action research study is guided by the following question: How does the implementation of a customized training program tailored to the individual athlete's abilities and goals impact the performance and confidence of a cross-country team over a season?

Just like learners in the classroom, every athlete possesses unique physical attributes, strengths, weaknesses, and goals. An individualized training program recognizes and capitalizes on these differences, allowing each team member to reach their maximum performance potential. This not only benefits the athletes but also contributes to the overall success of the team. The study of individual training programs for members of the same team is vital for optimizing athletic performance, preventing injuries, promoting athlete development, and enhancing the overall team experience. It represents a dynamic and evolving field that seeks to empower athletes and coaches to achieve their full potential while fostering a culture of excellence within sports teams.

Individualized training programs can help reduce the risk of injuries. By addressing specific weaknesses or imbalances in an athlete's body, coaches can design training regimens that enhance physical resilience and reduce the likelihood of injuries. This is crucial for sustaining team performance over a season. Research indicates that athletes are more likely to stay motivated and committed when they feel that their training aligns with their individual goals and capabilities. According to Deci and Ryan's Self-Determination Theory, intrinsic motivation, which is bolstered by aligning training with personal goals, plays a significant role in long-term athletic engagement and performance (Deci & Ryan, 2000). Additionally, Weinberg and Gould (2014) found that personalized training plans enhance an athlete's sense of competence and autonomy, further contributing to sustained motivation and improved team outcomes. This can improve practice attendance and lead to a better work ethic and a stronger team spirit. By recognizing and addressing individual needs, athletes can develop a growth mindset. They believe improvement is attainable through effort and effective training, which can positively impact their overall performance and well-being.

Context for the Study

Cross-country running, a discipline that demands exceptional physical endurance, mental fortitude, and strategic training, is no exception. In the pursuit of optimizing the performance of my cross-country team over this season, we (the coach and the 25 student-athletes) embark on an action research journey to explore the effects of implementing a customized training program. This program is meticulously designed to align with the individual athlete's abilities and goals with the hopes of improving the confidence of my runners. Compared to previous cross-country teams, this team is very young and somewhat new to the sport. These student-athletes are from academically challenging high schools in the Southeast United States, so the demand for academics needs to be taken into consideration. Since we have a fresh start with a new team, we are going to try to change the culture of just going out and running this route and, instead, look at each individual and determine their practices based on their ability, goals, and confidence with the hope that being more successful at practice will help them improve their 5k times. We usually practice 4 to 5 times a week, depending on the race meet schedule. Practices take place after school, and they will run around campus along with neighboring areas, which include a public trail, runs on the beach, and running up the I-95 bridge.

I have changed my coaching methods throughout the years. When I was younger, coaching was to make learning fun. Then, I got into private/club coaching. I realized that for the parent, winning is everything if their child is a part of it. This stage really changed how I coached and became more demanding and tough. As I moved into coaching high school sports, I used a combination of everything I learned in the past, which helped me become successful by leading many student-athletes to State Championships multiple times, winning three state titles, and being awarded County Coach of the Year. But then COVID-19 hit, and I just wanted to return to building a program. My strengths as a coach were pushed aside because I was more concerned that children were being active again. I did not consider how that would affect my program in years to come. I allowed students to miss practices because of the pandemic, but never really thought of them giving me excuses. This was not the culture I wanted to create, so I need to focus on shifting our team's culture to dedication once again.

Literature Review

In the world of competitive sports, the pursuit of peak performance and athletic development remains a central focus for coaches and athletes. In the sport of cross-country, the goal for enhanced performance and motivation among team members is necessary when planning their training program throughout the season. As the demands of the sport continue to evolve (e.g., college requirements time are constantly being lowered), the incorporation of customized training programs tailored to individual athletes' individual abilities and goals has become more popular. This literature review aims to assess the research that impacts the implementation of a personalized training program on the performance and motivation of a cross-country team over the course of a season.

Individualized Training Programs—Benefits for Athletes. The collection of literature provides the benefits of individualized training programs across various athletic disciplines. Although only some of the studies were runner-focused, the research collectively shows the potential of tailoring training plans to athletes' individual performance goals and abilities. Study findings emphasize the significance of customized training interventions in optimizing athletic performance and the well-being of athletes. Buchheit's (2008) study on the 30-15 Intermittent Fitness Test highlights the accuracy of this test in individualizing interval training for young athletes, aligning with the theme of individualized training programs and tailored performance interventions. The primary theme of the article is the importance of individualizing interval training programs for young athletes involved in sports. It emphasizes the need to tailor training intensities to the specific physiological capacities of each athlete to optimize performance improvements. The study highlights the accuracy of the 30-15IFT in assessing young athletes' maximal running speed (MRS). This is crucial for designing training programs that match the individual athlete's fitness level and capabilities. It offers valuable insights for coaches, trainers, and sports scientists involved in developing and optimizing training programs for young athletes in intermittent sports. Similarly, Samozino et al. (2017) emphasize the importance of personalized training approaches, the potential for significant performance gains through individualization, and the value of force-velocity profiling in sports training and performance optimization. This research provides a framework for enhancing athletic performance through tailored training strategies.

The effectiveness of high-intensity functional training (HIFT) guided by individualized heart rate variability (HRV) suggests that tailored training programs aligned with an athlete's physiological response can enhance their sense of control and mastery, positively impacting their motivation to engage in rigorous training (DeBlauw et al., 2021). The study suggests that using HRV as a guide for HIFT can lead to health and fitness improvements similar to predetermined training. The study's findings support the practical application of HRV monitoring in exercise programs, especially for high-intensity training.

Intensity of Programs. There are multiple ways to track fitness now due to advances in technology. One research study explores the use of fitness trackers in a blended learning model to personalize fitness running lessons, promoting an understanding of individualized training intensity by integrating technology and personalized learning approaches (Chaloupský et al., 2021). The study highlights the potential of fitness trackers to support individualized learning in physical education. This approach can be extended to other fitness and sports-related courses, allowing students to set and achieve personalized goals. The study promotes health-oriented fitness as a valuable educational goal. It emphasizes the importance of regular physical activity, which can contribute to overall well-being and a healthier lifestyle. The study highlights the role of the teacher as a coach and facilitator in personalized learning. Teachers can use fitness trackers and blended learning approaches to provide ongoing support and guidance to students. Students must learn that training does not have to be high in intensity every day because their bodies need to recover. They also learn the difference between being sore and hurt. Mopas and Huybregts (2020) also examine how wearable fitness trackers influence the training experience of endurance athletes, providing insights into how data-driven

feedback can inform and modify training intensity based on real-time physiological cues and performance metrics. The study highlights the dynamic relationship between athletes and their fitness trackers. The findings suggest that fitness trackers are not merely tools for data collection but are integrated into athletes' self-perception and self-understanding. Athletes use the data generated by these devices alongside their embodied experiences to gain a more comprehensive understanding of their training and performance. The research suggests that wearable fitness trackers play a multifaceted role in athletes' training experiences and identities.

As we see the positive effects that fitness trackers have on the intensity of training, it becomes evident that these devices can motivate athletes to push harder and monitor their progress more effectively. Research done by Ulbricht et al. (2013) presents a framework for fitness testing and individualized training programs in the German Tennis Federation, underlining the importance of customizing training intensity to match the specific needs and goals of tennis players, thus optimizing their performance outcomes. The study emphasizes the importance of individualized training programs for tennis players. By assessing the fitness levels of each player comprehensively, coaches and trainers can tailor training regimens to address specific strengths and weaknesses. This approach can lead to more effective and efficient training, optimizing player development. The inclusion of pubertal timing in the assessment process recognizes the impact of growth and maturation on physical attributes. The study recognizes that tennis players are not one-size-fits-all and that their development should be guided by evidence-based assessments and tailored training programs.

Motivation of Runners. Research was done to examine the dose-response relationship of the autonomic nervous system to individualized training impulse in marathon runners, revealing how understanding one's physiological responses to training can inspire runners to set and achieve personal milestones, thereby fueling their intrinsic motivation. Training Impulse Methods and Heart Rate can be a valuable tool in providing individual training methods. Marathon runners can use the information gained from research on the dose-response relationship of Autonomic Stress Workload (ANS) to individualized training impulses to optimize their training plans and reduce the risk of overtraining or injury. (Manzi et al. 2009). Marathon runners need to stay motivated because their training program for just one race takes months of preparation, and a lot of times, they have to do long runs on their own.

Someone's motivation is sometimes half the battle because the individual must want to put in the work in order to get better. One researcher analyzed training patterns associated with injury in marathon runners, emphasizing the importance of balanced training approaches and workload management, which can potentially prevent setbacks and instill a sense of persistence and determination among runners (Toresdahl et al., 2022). The study highlights the importance of injury awareness among marathon runners. The study introduces the concept of the Acute Workload Ratio (ACWR), which is a measure of how training volume changes over time. Toresdahl et al. (2022) demonstrate the value of continuously monitoring injuries and illnesses during training. Regular check-ins with runners can help identify issues early and prevent exacerbation of injuries. These check-ins can also be an indicator of the runner's motivation, making sure they are in a good head space.

Conclusion. The literature has provided the connection between an athlete's response to training, intensity, and motivation. Findings have highlighted the necessity of maintaining a balanced and personalized training approach to foster persistence and determination among athletes. Overall, the findings suggest that individualized training programs not only contribute to improved athletic performance but also play a pivotal role in nurturing athletes' motivation, confidence, and overall well-being. By acknowledging the importance of personalization in training, coaches can create a positive environment that aids in the development and success of cross-country teams as well as other athletes in various sports. The findings from the research for this study emphasize the crucial role of

individualized training programs in maximizing athletic potential and fostering a sense of achievement and fulfillment among athletes in the field of competitive sports.

Methodology

Timeline

Before starting the season, comprehensive strategies were employed to engage student-athletes in goal setting, leading to sessions with their coach. During the first week of the season, the coach met with the student-athletes and talked about goals for the season, which he recorded in his journal. The first official 5k race of the season was in mid-August 2023, which marked the onset of the individualized training program's implementation, allowing athletes to put theory into practice within the dynamic context of race scenarios. Athletes could experience the initial phases of the individualized training program in a competitive setting. The race provided a baseline for evaluating the effectiveness of the training program and identifying areas for further improvement. Over the course of eight regular season races concluding in late October 2023, the team's progress was tracked through multifaceted methods.

Knowing that the cross-country team would be the focus of study, the coach created a group chat to gain feedback from his student-athletes from the first weeks of the season. The coach conducted weekly observations and maintained journals to monitor the team's progress. The observations focused on the athletes' adherence to the training program, their attitudes during practices and races, and any noticeable changes in their overall performance.

Weekly surveys were administered to the athletes using Google Forms to gather their feedback and perceptions regarding the training program. The surveys aimed to assess the athletes' experiences, challenges, and progress throughout the week. This regular feedback helped track the athletes' perspectives and experiences throughout the season. The final survey was given to the team at the beginning of November. The boys' team qualified for the State Meet, which was held in the middle of November.

Data Collection

Data that was collected consisted of the following: a pre-season survey administered using Google Forms; student-athlete weekly surveys using Google Forms; team group chat using the Band app; coach-recorded observations; and 5k races using a chip timing system with results sent to Track & Field Results Reporting System (TFRRS) powered by DirectAthletics.

A pre-season survey was distributed using Google Forms to gather initial insights and baseline data. The survey aimed to understand the athletes' expectations, goals, and perceived areas of improvement. Participants were asked to provide information about their previous training experiences, personal and team goals for the season, and the type of coaching style that they feel works best to help motivate themselves. The pre-season survey served as a foundational tool for individualizing the training program to each athlete's abilities and goals and providing essential data to help develop their individualized training program.

The weekly surveys, also conducted through Google Forms, captured ongoing feedback, experiences, and progress. These surveys were crucial for assessing athletes' responses to the training program, identifying emerging challenges, and tracking their evolving experiences throughout the season. The data collected from these surveys facilitated continuous assessment and iterative improvements to the training program. By employing a multi-faceted approach to data collection, encompassing both qualitative and quantitative methods, the study ensured a comprehensive understanding of the individualized training program's impact on the athletes' performance and development.

Data Analysis

Data was analyzed to determine the impact of the individualized training program on the performance of the cross-country team over the season. Several data sources were utilized: weekly surveys, time records from 5k races, coach observations, and conversations with student-athletes. The analysis focused on understanding how the individualized training program affected the athletes' performance and overall team dynamics.

By conducting weekly surveys, data was collected on participants' perceptions of the training program's effectiveness, their perceived improvements in physical performance, and their overall satisfaction with individualized training. Also, there was a question to see if there were any obstacles that a runner might have faced during that week, such as injury, sickness, a test to study for, etc. The surveys relied on quantitative and qualitative approaches to identify common themes in athletes' perceptions throughout the season. Likert scale questions measured changes in motivation levels and perceived physical conditions. When looking at the data, we could compare the average motivation scores from the beginning and end of the season, which could reveal trends in athlete engagement. Open-ended survey questions provided qualitative insights into the athletes' experiences. Content analysis was used to identify common themes such as specific challenges like injury, sickness, academic demands, and successful strategies.

Chip timing was used for 5k races, which allowed the data to be collected and time records to be analyzed throughout the season. This allowed us to measure individual and team performance improvements. Team averages were scored during race times, as well as individual personal records and team rankings, to assess the effectiveness of the individualized training program. Comparing baseline race times with subsequent races enabled measurement of progress. Metrics such as personal best times, average improvement per athlete, and team performance trends were analyzed. A significant increase in the number of personal bests achieved mid-season compared to the start could indicate the program's effectiveness.

The coach was able to observe different behaviors throughout the season and races. Also, the coach made sure to communicate with the athletes to find out their needs as well as how they were feeling. Data collection included observations from the coach's perspective and insights on individual progress, teamwork dynamics, and goals to be reached through the individualized training program. The information was analyzed by reviewing the coach's notes and communication with athletes to understand the impact of the individualized training program. This allowed the coach to identify any common trends in the athletes' responses to the training program and determine the program's effectiveness in addressing individual and team strengths and weaknesses.

Results

The 2023 season represents a very young and new team in the sport of varsity cross country. Many goals were determined by individuals and a team. When analyzing the data received, common themes were discovered to answer the guiding research question: How does the implementation of a customized training program tailored to individual athlete abilities and goals impact the performance of a cross-country team over a season?

Finding 1: Runners want to get better individually and also want their teammates to do better, even though cross-country can be considered an individual sport.

Through the weekly surveys and conversations with student-athletes, it became evident that implementing the individualized training program not only fostered individual improvement but also promoted a collective desire for team success. One athlete remarked during a conversation, "I'm really happy with my progress, but seeing my teammates improve gives me an extra push during races. We all want each other to succeed" (Captain Conversation, Week 11). This conversation was

right after the meet on 10/16/23 when he broke the school record for the first time (he broke his record two more times during the season). This sentiment was further supported by survey data, with 85% of respondents expressing a strong interest in the overall performance of their teammates (pre-season survey). The finding suggests that the individualized training program instilled a sense of camaraderie and collective motivation within the team, leading to an overall increase in performance and team cohesion over the season.

Finding 2: The team wants to build positive relationships among themselves to help motivate each other; when the number of participants is high at practice, team members push each other to reach their goals.

The coach's observations and the analysis of practice attendance data revealed a significant correlation between the presence of a higher number of participants at practice and increased motivation among team members. The coach noted, "During practices with a greater number of participants, I noticed an increase in teamwork and encouragement. The runners seemed more driven to support each other and achieve their collective goals" (Journal, Week 7). Also, the number of practice sessions was correlated with a rise in positive interactions and constructive feedback among team members, suggesting a solid effort to build strong and supportive relationships. This data aligns with the qualitative feedback from the athletes, with one participant mentioning during an interview, "When we have more people at practice, there's this energy that drives us to work harder. It's like we're all pushing each other to reach our goals" (Survey, Week 5). This finding suggests the positive impact of the team's dynamic and increased participation on individual and collective motivation, leading to enhanced performance throughout the season. Another pre-season goal was to "Build stronger relationships with my teammates." However, these 15 weeks of the season were not always positive, as one athlete stated, "I have noticed that teammates get concerned and sometimes frustrated when members are missing practices without a legit excuse" (Journal, Week 3). The coach observed, "I've seen a significant improvement in the team's performance during our high-participation practices. The players seem more engaged and determined to outdo one another, which is fostering a healthy spirit of competition" (Journal, Week 7).

Survey data indicated that 90% of the athletes felt the training program of the week helped them prepare for the next race. One athlete mentioned in a survey response, "The training program brought us closer together as a team. We constantly motivate and push each other to do our best" (10/14 survey). During the Week of 10/23, 90% of the team was at every practice, which led to the last meet of the regular season, in which 10 of the 14 varsity runners had a personal record, and three had a season-best. During the last two weeks of the regular season, 100% of the team was highly satisfied with the week's individualized training program, indicating a significant correlation in how teammates can motivate you to train harder. The coach's observations further emphasized increased teamwork and a positive atmosphere during practices and races. The coach noted, "The athletes have developed a strong bond, supporting each other both on and off the track. This unity has contributed significantly to their overall performance" (Journal Week 8). When looking at the first race on August 26, 2023, the girls' average team time was 25:35 while the boys' average time was 19:05 compared to the last race of the regular season at the same park, the girls' average time was 23:47 and boys' came in at 18:01; indicating that both teams improved dramatically from the start of the season until the end.

Finding 3: Training has overall increased all dimensions of health.

The analysis of weekly surveys and feedback from both participants and the coaching staff indicated improvement in various dimensions of health throughout the season. Athletes consistently reported enhancements in physical endurance as well as mental and emotional well-being because of being part of the cross-country team. A participant highlighted in an interview, "I feel stronger, mentally sharper, and more balanced since starting the training program. It's not just about running; it's about

my overall well-being” (Survey, Week 5). Additionally, the coach’s observations emphasized the positive changes in the team’s overall physical and emotional health throughout the season. Granted, being a student-athlete can be challenging; they must find a balance. One student-athlete stated, “I’ll admit that it is a bit tricky trying to balance running, clubs, and schoolwork. However, I would argue that it has helped me become better at time management. Also, I wrote about the struggle to juggle extracurriculars in my “statement of purpose” essay for an application and I got accepted! :)” (Survey, Week 2) However, being a student-athlete also has its perks since it helps one grow, which we see in the statement here: “Going to training keeps me so much more organized. While I run, I always think about how I will tackle my homework and extracurriculars. I create a schedule so that I can be as productive as possible when I get home.” (Survey, Week 3) The finding was further supported by a quantitative analysis of performance metrics, which demonstrated a significant increase in the team’s overall endurance, speed, and resilience. Collectively, the data strongly suggests that the implementation of the individualized training program contributed to the development and well-being of the cross-country team, substantiating the positive impact on various dimensions of health throughout the season. Additionally, throughout the vigorous season, the Team’s overall GPA at first semester midterms was 3.77.

So, what happened after 15 weeks of the cross-country season? The boys’ varsity team had a State Bid and competed in the State Championship on November 17th, 2023, at one of the hardest courses in the state. When the race concluded, the coach had a conversation with the team, and out of the seven runners that competed, only one runner (a senior) was happy to have a personal record (PR) but was still frustrated because he still lost to a freshman on the team when his goal was to finally beat him at the State Meet. As the athletes cooled down from the race and started to look at the results more closely, they noticed that coming into the meet being ranked #26 in the State, they finished #20 and beat two schools from their Region that had been beating them all season; their perspective on the race had made a turn. One of the goals from the season was to be the best small-sized high school in the surrounding area, and they achieved that goal. Also, the captains in the Band chat during week 3 stated, “We start strong during but cannot finish strong, which ruins our placement- we have to fix this.” they did! In Figure 1, you will see the points at the mile marker, two-mile marker, and finish in which they decreased their points, meaning they were passing more competitors throughout the race as a team. Even though our two main goals of having the top runner medal at the State meet and finishing in the top 15 as a team at the State meet, the team still had the school’s best race at the State Championship. Six of the seven runners who ran at the State Championship will return next season, and they are already pursuing their goals to be top contenders.

Figure 1. *State Championship Race Live Scoring*

	PI	Pts	1	2	3	4	5	(6)	(7)
1 Mile	19	536	15	60	136	150	175	(190)	(196)
2 Mile	19	525	22	71	100	151	181	(201)	(208)
5000m	20	517	26	74	77	160	180	(209)	(210)
			Spread		Average			Total	
1 Mile			48.2		5:23.4			26:56.8	
2 Mile			1:45.5		11:26.0			57:09.6	
5000m			2:37.7		18:09.7			1:30:48.4	

Discussion

As the researcher and coach leading this action research project, I gained valuable insights into the impact of implementing an individualized training program that focused on the individual athlete's abilities and goals for this cross-country team over a season. I never thought that changing my coaching method would be based on the data analysis and the overall research process. As a researcher and coach, I was taught how the significance of individualized training programs can become important to the team. The findings from the data show that athletes not only aspire for personal improvement but also genuinely care about the success of their teammates. This collective motivation contributed to proof that teamwork makes the dream work. The realization that the individualized training program approach benefits individual performance and influences the team's overall success was a crucial learning point for both the coach and team members. Learning this information shaped my coaching philosophy, which emphasized recognizing and nurturing the interconnectedness of individual and team goals.

The impact of the team's needs required participation in practices and was a key factor influencing motivation and performance. The correlation between increased team participation and enhanced motivation among team members underscored the importance of creating a positive team culture. The data received from observations, surveys, and race results consistently pointed to the positive influence of a supportive team environment on individual and collective success. This learning will guide future coaching strategies, emphasizing the cultivation of a positive team culture and encouraging high attendance at practices to foster motivation and teamwork. The data received throughout this study indicates that the individualized training program not only contributed to improved physical performance but also positively influenced various dimensions of health.

The implications of this action research study show that implementing an individualized training program for individual athletes in a cross-country team is far-reaching and holds significance in all competitive sports. The research reveals insights that can influence coaching philosophy, athlete development, and team bonding. This study demonstrates that individualized training programs not only enhance individual performance but also contribute to building a sense of team bonding and motivation. Athletes expressed a genuine interest in the success of their teammates, indicating that individualized training can foster a team-oriented mindset. This finding challenges the traditional perception of cross-country as an individual sport and underscores the importance of teamwork in achieving collective goals. Coaches need to realize that they can no longer train everyone in the same way and expect the same outcome.

As I reflect on how I was able to balance the research and implementation of an individual training program for my high school cross-country team, the impact on my coaching strategies took a shift. This action research project's aim of understanding how individualized training programs influence the performance and confidence of a cross-country team over a season has not only provided valuable insight and data but has also shaped my coaching philosophy of remembering that there are different paths to take to reach the same goal.

Recognizing that each athlete possesses unique strengths, weaknesses, and goals, I altered training programs to cater to these individual needs. Changing up the training programs related to the diversity within the team, however, still focused on the importance of addressing individual needs for collective success. The commitment to individualized training has not only enhanced athletic performance but has contributed to a more inclusive and supportive team environment.

This research process has deepened my knowledge of the significance of athlete development and how individuals grow. Beyond focusing solely on physical aspects, the findings highlighted the relationships of physical, mental, and emotional well-being. The implementation of the training program positively influenced various dimensions of health, not just athletic improvement. The

program focused on overall growth. Witnessing student-athletes' improvements in well-being reinforces the understanding that sports play a crucial role in shaping well-rounded individuals.

While cross-country is often perceived as an individual sport, the research revealed that a sense of collective motivation and support contributes significantly to individual and team success. This research allowed me to reevaluate my coaching methods and create a growth mindset to improve the program. As a coach with 25 years of experience (in multiple sports), adapting to changes and embracing new coaching styles is crucial for growth.

This action research project has not only provided answers to the specific question but has also instilled a deeper appreciation for the dynamic and evolving nature of coaching. Coaches can create a future, but at the same time, coaching can affect the athlete. This experience reaffirms the belief that coaching is not a static method but a continuous learning process. As I move forward, the commitment to individualization of athlete development will contribute to the overall success and well-being of the athletes I have the privilege to coach.

References

Corresponding Author: Christopher Childs

Author Contact Information: cchilds2@fau.edu

- Buchheit, M. (2008). The 30–15 intermittent fitness test: Accuracy for individualizing interval training of young intermittent sport players. *Journal of Strength and Conditioning Research* 22(2), 365–374. <https://www.doi.org/10.1519/JSC.0b013e3181635b2e>
- Chaloupský, D., Chaloupská, P., & Hrušová, D. (2021). Use of fitness trackers in a blended learning model to personalize fitness running lessons. *Interactive Learning Environments*, 29(2), 213–230. <https://www.doi.org/10.1080/10494820.2020.1799027>
- Deci, E., & Ryan, M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://www.doi.org/10.1207/S15327965PLI1104_01
- DeBlauw, J. A., Drake, N. B., Kurtz, B. K., Crawford, D. A., Carper, M. J., Wakeman, A., & Heinrich, K. M. (2021). High-intensity functional training guided by individualized heart rate variability results in similar health and fitness improvements as predetermined training with less effort. *Journal of Functional Morphology and Kinesiology*, 6(4), 102. <https://www.doi.org/10.3390/jfmk6040102>
- Manzi, V., Castagna, C., Padua, E., Lombardo, M., D’Ottavio, S., Massaro, M., Volterrani, M., & Iellamo, F. (2009). Dose-response relationship of autonomic nervous system responses to individualized training impulse in marathon runners. *American Journal of Physiology*, 296(6), 1733–1740. <https://www.doi.org/10.1152/ajpheart.00054.2009>
- Mopas, M., & Huybregts, E. (2020). Training by feel: Wearable fitness-trackers, endurance athletes, and the sensing of data. *The Senses and Society*, 15(1), 25–40. <https://www.doi.org/10.1080/17458927.2020.1722421>
- Ulbricht, A., Fernandez, J., & Ferrauti, A. (2013). Conception for fitness testing and individualized training programs in the German Tennis Federation. *Orthopedics and Traumatology*, 29(3), 180–192.
- Samozino, P., Brughelli, M., & Morin, J. (2017). Effectiveness of an individualized training based on force-velocity profiling during jumping. *Frontiers in Physiology*, 7, 228856. <https://www.doi.org/10.3389/fphys.2016.00677>

Customized Training Program for Athletes

Toresdahl, B., Metzl, J., Kinderknecht, J., McElheny, K., & de Mille, P. (2022). Training patterns associated with injury in New York City marathon runners. *British Journal of Sports Medicine*. 57(3), 146–152. <https://www.doi.org/10.1136/bjsports-2022-105670>

Weinberg, R., & Gould, D. (2014). *Foundations of sport and exercise psychology* (6th ed.). Human Kinetics.

Appendix A

Pre-Season Questions:

1. *What are your primary motivations for participating in cross country this season?*
2. *On a scale of 1 to 5 (1 being not important at all and 5 being extremely important), how important is setting specific season goals to you?*
3. *What goals have you set for yourself this cross-country season?*
4. *Are there any team goals or objectives you hope to achieve with your cross-country team this season?*
5. *Are there any specific aspects of your performance that you would like to improve this season (e.g., endurance, speed, mental toughness)? Please elaborate.*
6. *What role do you believe teamwork and camaraderie among your teammates will play in achieving your individual and team goals this season?*
7. *Is there anything else you would like to share or discuss regarding your season goals or expectations for this cross-country season?*
8. *How confident are you in reaching your goals?*

End-of-Week Questionnaires:

1. *On a scale of 1 to 5 (1 being very dissatisfied and 5 being very satisfied), how satisfied are you with the training program this week?*
2. *How well do you think the training program aligns with your individual abilities and goals? Please explain.*
3. *What challenges or difficulties did you face while following the training program this week?*
4. *What physical fitness, endurance, or running performance changes have you noticed?*
5. *How do you feel about your overall energy levels and physical well-being this week in relation to your training program?*
6. *Have you been able to balance your academic commitments with the demands of the customized training program effectively this week? Please elaborate on any challenges or successes.*
7. *Are there any modifications or adjustments you would like to suggest for your training program based on your experiences this week?*