

Exploring the Role of Experiential Learning in the Development and Performance of
Elite Endurance Athletes

by

W. David Jackson
B.A., Brock University, 2000
B.Ed., University of Ottawa, 2001

A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of

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Abstract

The primary purpose of this study was to explore how an athlete learns from experience and how this has impacted their development in becoming capable elite international athletes. Based on the qualitative theory of phenomenology, a purposeful sampling technique was used to identify participants who were experts in the phenomena being studied. In-depth interviews were conducted with four elite level triathletes (3 female; 1 male). A thematic analysis completed for each participant revealed a number of general themes. The four central themes that pervaded across participants included *Learning from a New Coaching Approach*, *Learning from Performance*, *Learning during Performance*, and *Seeking out Learning*. Different types of learning were evident and although the central themes fit with a number of different theories and models of learning, the best fit was the network model that recognizes multiple ways of learning. The relevance of experiential learning and the role of the athlete as an active learner were also highlighted. Implications for athletes and coaches include athletes being encouraged to explore various learning methods and coaches being challenged to create an environment that optimizes an athlete's learning opportunities.

Table of Contents

Supervisory Committee.....	ii
Abstract.....	iii
Table of Contents.....	iv
List of Figures.....	vi
Acknowledgements.....	vii
Chapter 1: Introduction, Review of Literature, and Theoretical Framework.....	1
Operational Definitions.....	4
Learning.....	4
Experiential Learning.....	4
Endurance Performance.....	5
Elite Athlete.....	5
Critical Competitive Experience.....	6
Performance Self.....	6
Background.....	7
Review of Literature.....	8
Learning Theories.....	8
“Building a Brick Wall” Model of Learning.....	8
“Network” Model of Learning.....	9
Post Performance Evaluation.....	11
A Debriefing Model.....	12
Situated Learning.....	14
Experiential Learning.....	16
Determining a Theoretical Framework.....	18
Phenomenology.....	18
The Concept of Bracketing.....	19
Summary.....	20
References.....	22
Chapter 2: Manuscript.....	26
Introduction.....	26
Methodology.....	28
Research Design.....	28
Theoretical Framework.....	29
Data Collection.....	30
The Researcher as Participant.....	30
Self-Reflection.....	30
The Incident.....	31
Learning from this Incident.....	32
Recruiting Participants.....	35
Data Analysis.....	37
Trustworthiness of Data.....	38

Results.....	38
Participant #1.....	39
Interpretation for Participant #1.....	43
Personal Ownership of Coaching.....	43
Gaining Perspective.....	43
Learning through Disappointment.....	44
Learning through Competition.....	44
Seeking out Learning.....	44
Participant #2.....	45
Interpretation for Participant #2.....	48
Learning through Disappointment.....	48
Learning through Risk-Taking.....	48
Learning through Competition.....	48
Learning from Other Athletes.....	49
Participant #3.....	49
Interpretation for Participant #3.....	52
Learning from a Coaching Change.....	52
Learning Confidence from Performance.....	53
Learning from Success.....	53
Gaining Perspective.....	54
Participant #4.....	54
Interpretation for Participant #4.....	59
Learning from a Coaching Change.....	59
Learning a New Mental Approach.....	60
Learning through Performance.....	60
Learning a New Perspective.....	60
Discussion.....	61
Central Theme #1: Learning from a New Coaching Approach.....	62
Central Theme #2: Learning from Performance.....	63
Central Theme #3: Learning During Performance.....	64
Central Theme #4: Seeking out Learning.....	66
Revisiting the Researcher's Experience.....	67
Summary.....	69
Conclusion.....	71
References.....	74
Appendix.....	78

List of Tables

Table 1. Fitting the Central Themes to the Theories and Models of Learning.....	71
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List of Figures

Figure 1. Building a Brick Wall Model of Learning.....	9
Figure 2. Network Model of Learning.....	10
Figure 3. A Six Step Debriefing Model.....	14

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Chapter 1

Introduction, Review of Literature, and Theoretical Framework

An aim of sport psychology research is to improve athlete performance. At an elite level, where athletes dedicate much of their daily lives to their sport, even slight improvements can make a significant difference. The learning process an athlete experiences may have an effect on sport performance and therefore makes athlete learning an important topic in sport research (Orlick, 2000).

Following an athletic event, whether the athlete has met, exceeded or failed to meet expectations they will often seek out methods to help them improve for future training and competitions (Orlick, 2000). This process of reflection for the purpose of improvement could be characterized as learning. Learning is defined as “the processing of information both from outside the learner (external experience) and a reprocessing of ideas already possessed by the learner (working with internal experience)” (Moon, 2004, p. 232). There are several theories and models of learning (Anderson, Reder, & Simon, 1996; Moon, 2004; Schön, 1983; Werthner & Trudel, 2006) but specific to sport the studies related to learning that are most prevalent are motor learning oriented (Lee, Swinnen, & Serrien, 1994; Liao & Masters, 2001). There is a paucity of literature on how athletes learn and the literature that exists from a cognitive learning perspective primarily focuses on post performance evaluation (Hogg, 2002).

Among the numerous theories of learning, certain models view learning as taking place in different ways, including when an individual learns in a directed formal manner, by seeking out their own knowledge or by reflecting on their experiences (Moon, 2004).

Other models view learning primarily as an interaction that takes place in a directed form such as a student-teacher relationship.

Sport related learning models are often presented as systematic models for coaches and athletes to evaluate performances. Models of learning, such as the ones described above, present valuable insights into how individuals learn. However, learning models can be limiting and therefore not fully represent the unique ways individuals experience learning. In a sport context it is valuable to identify what models or blend of models best reflects the lived experiences of athletes and if a single systematic model can represent unique athlete accounts.

Experiential learning is a type of learning that has become increasingly beneficial in a number of disciplines including nursing (Carpenter & Streubert, 1995; Macnee, 2004) organization (Cassell & Symon, 1995), and education (Foran, 2005; van Manen, 1999). Experiential learning is defined as a “process in which an experience is reflected upon and then translated into concepts which in turn become guidelines for new experiences” (Saddington, 1992, p. 44). This type of learning acknowledges the subjective nature of experience (Moon, 2004).

A few studies have examined athlete experiences from an experiential perspective (e.g. Becker, 2009; Connaughton, Wadey, Hanton, & Jones, 2008; Devonport, 2006; Holt, 2003). Nesti (2004), states that sport provides one of the best means for this type of research as it places greater emphasis on subjective experience. This concept relates appropriately to the field of sport psychology, which places importance on individual training programs and experiences (Orlick, 2000).

The qualitative method of phenomenology was used to guide this research study. Whitson (1976), states that phenomenology can make a great contribution to research in many areas of sport related research. Understanding the lived experiences of individuals provides an effective means of uncovering the essential meanings associated with a particular phenomenon such as learning (van Manen, 1990). This paradigm was used in order to effectively capture subjective experiences of athletes.

An aspect of experiential learning involves a reflection process. Moon (2004), states that there is a small amount of research that explores reflection and learning from experience. Specifically, there appears to be a lack of literature within the field of sport relating to athletes and how they reflect and learn.

This study focused on the experiences of elite athletes. In his book *The Reflective Practitioner*, Schön (1983), recognizes the importance and value of gaining knowledge through the reflective process from individuals who are experts in a particular discipline. Schön states that in research there is no substitute for the qualified professionals' critical self-reflection. In this study top-level international athletes are viewed as expert sport performers and therefore able to provide relevant and valued information to the phenomenon of athlete learning.

The purpose of this study was to explore the phenomenon of athlete learning, its impact on development and performance and whether learning can, itself, be placed within a specific theory or model of learning. Questions that guided this process included: 1) How does an athlete learn about their performance? and 2) When does the learning occur?

Operational Definitions

For the purposes of this research the following definitions were use. A brief description will explain how each term was applied.

Learning

Schuell (1986) defines learning as “the way in which people acquire new knowledge and skills and the way in which new knowledge and skills are modified” (p. 412). The literature on learning contains a number of definitions that differ depending on the theory being discussed (e.g. behavioral, cognitive, constructivist, etc.). Schuell and Lee (1976) outline three criteria for a broad concept of learning including a change in an individual’s behavior and ability, the change relates to a form of practice, and the change must be enduring. The above definition and concepts present a general explanation of learning. This study positioned its concept of learning around the concept of experiential learning that is outlined below.

Experiential Learning

Saddington (1992) defines experiential learning as “a process in which an experience is reflected upon and then translated into concepts which in turn become guidelines for new experiences” (p. 44). For this study experiential leaning was placed around the work of Jennifer Moon (2004). Moon offers the following defining criteria around experiential learning: a) learning is not usually “taught”; b) the learning material is usually a direct experience; c) there is often reflection involved; d) the learner is active in the learning process; and e) the subjective nature of the learner is acknowledged.

Endurance Performance

For this study, an endurance performance was defined as an aerobic activity; an athletic competition that lasts for over two minutes. This definition encompasses many different sporting events. In all athletic events, athletes will have the opportunity to reflect on their performance following competition. The key distinguishing feature, is that in endurance events athletes have the potential to reflect in the action of their performance. Reflection “in” action occurs during an event whereas reflection “on” action occurs after the event (Schön, 1983). For example, it can be argued that a competitor in a 100m sprint race (non-endurance event) will not have the opportunity to reflect during a race as compared to a cross-country skier, triathlete, or marathon runner. This study narrowed its scope and focused on athletes in the endurance sport of triathlon.

Elite Athlete

For this study, an elite athlete was defined as an individual who has competed competently at an international level. This study focused on elite level athletes because they are able to provide experiences from a variety of critical competitions and provide rich, descriptive data. Schön (1983) explains the importance of conducting research with professionals in their particular discipline as they are able to engage in critical self-reflection.

Compared to non-elite athletes, elite athletes are usually more aware kinesthetically of their body (Muaidi, Nicholson, & Refshauge, 2008). Top-level sport performers dedicate much of their daily lives to training, are intrinsically motivated, are self-focused on improving and commit many months or years focusing on a major competition (Orlick, 2000). Since these events are important, the athlete, coach and

others in the athlete's support community will seek to learn from competitions in order to improve for subsequent performances. The participants for this study were athletes who are currently (except for one participant who retired in the past year) competing at a competent international level in the sport of triathlon.

Critical Competitive Experience

For this study, a critical competitive experience was defined as an athletic event where significant expectations were present. Certain events carry much more importance to an athlete. When learning from an athletic event, critical incidents can provide an in-depth level for reflection by allowing the athlete to look beyond themselves towards the greater meaning of the event. Critical incidents, or critical competitive experiences, promote an increase in awareness of the variables that are important for teaching and learning (Griffin, 2003). For example, if a runner is preparing for a marathon event, they will place much more purpose and identity on the marathon than a five-kilometer race. Although the athlete can still learn from a less important competition, much more of their focus, attention and perspective will identify with a critical competition.

Performance Self

For this study, performance self is defined as the presentation of self in an athletic environment. An individual will present himself or herself differently in an athletic setting compared to other situations. Goffman (1959) discusses how different aspects of life are a series of performances. Individuals attempt to persuade others of their definition of themselves in different social situations. This concept of playing or performing different roles for different audiences applies to athletes in their competitive environment. An athlete may reveal an extremely focused and intense personality in a sporting context

as opposed to how they act away from this environment. An athlete's performance self includes their cognitive, affective and physical characteristics.

Background

My interest in conducting this study resulted from my own experiences as an athlete. As a distance runner, I have competed at a provincial and national level. During my competitive experiences, I have had exciting moments of achieving or exceeding a personal goal. I have also experienced the disappointment of falling short of the expectations I had set out to achieve. Through talking to those who are part of my performance environment (coaches, sport psychology consultants, training partners, family and friends) or reflecting on my own, I have tried to learn from my competitive experiences in order to improve for future events. Different events and outcomes have brought about diverse learning experiences. Learning has occurred at different times and in various ways. Listening to media interviews where professional athletes have discussed what they learned from a competition and reflecting on my own athletic experiences, catalyzed my interest in the different learning processes of elite endurance athletes.

To answer the research questions of interest it was important to understand the experiences of athletes and how they learn. Phenomenology is a theoretical framework that focuses on an individual's experience and posits that that experience is unique and diverse from others. Convenient beginnings to phenomenological inquiry, as is the case with this study, come from the researcher's personal experience (van Manen, 1990). Rather than attempting to ignore my personal experiences, I viewed them as a positive

contribution to the research process in that they provide insights to the phenomenon being studied (van Manen, 1990).

Review of Literature

Learning is an important goal related to sport performance that supports improvement in subsequent training and competitions. An in-depth review of the literature as it relates to learning in sport provides a background and context for the approach taken for this research study. The following section begins with an overview of key models and theories of learning.

Learning Theories

“Building a Brick Wall” Model of Learning. The “Building a Brick Wall” view of learning recognizes a teacher providing the learner with “bricks of knowledge”. The first of two learning models presented by Moon (2004) is illustrated in Figure 1 with specific reference to an athlete specific context. Within this model it is assumed that the teacher knows how the bricks fit into the pattern of the wall. The wall (knowledge) is progressively built over a period of time. In this linear view of learning, incorrect bricks (knowledge, skills) can be eventually replaced by more appropriate or relevant bricks.

This model relies extensively on a direct teaching method. Learning is limited to formal, directed or mediated learning situations and other learning conditions are discounted. This view may restrict the concept of learning and the exploration of alternative avenues of how learning takes place.

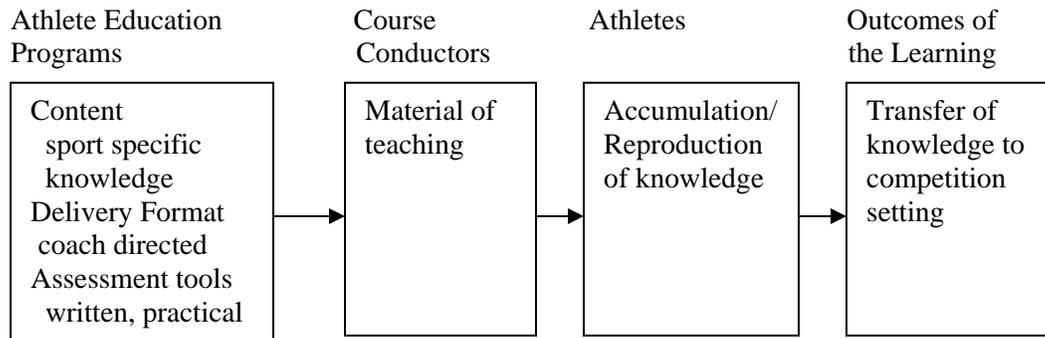


Figure 1. Building a Brick Wall Model of Learning

Adapted, with permission, from P. Werthner and P. Trudel, 2006, "A new theoretical perspective for understanding how coaches learn to coach" *The Sport Psychologist* 20(2): 200.

"Network" Model of Learning. A second model of learning presented by Moon (2004) is described as a "network". In this approach, learning occurs in a number of different ways. In situating this model of learning for their study, Werthner & Trudel (2006) presented three different forms of learning that take place in the network model. Mediated learning is directed by another person. In an athletic context, mediated learning occurs when an athlete is being formally instructed by a coach.

Unmediated learning situations occur when there is no direction by another person and the learner is responsible for taking action for their own learning. An athlete engages in this type of learning when they seek out information from a book or by talking to other athletes.

With internal learning, there is a reconsideration of existing ideas in the individual's cognitive structure. Internal learning occurs for an athlete when they reflect on their actions either during a performance (in action) or after an event (on action).

Figure 2 illustrates the network model of learning (Moon, 2004 illustrated in Werthner & Trudel, 2006). In this model an individual learns in a number of different

ways and often simultaneously, creating a very complex learning process as new information or learning can change the cognitive structure or can be changed in the cognitive structure (Moon, 2004). In this model, a learner does not necessarily progressively become wiser but rather knowledge is transformed and revised.

The network model presents a very thorough view of learning. It relates well to experiential learning as it stresses the reflection aspect of learning and views learning as occurring in a number of different ways. The network model is a fairly new theoretical perspective and there is limited research that has tested its perspective.

Werthner and Trudel (2006) also used a fictitious example to illustrate how it could apply to elite coaches. They highlight the importance of viewing the learning process as subjective and the challenge this presented to traditional learning theories.

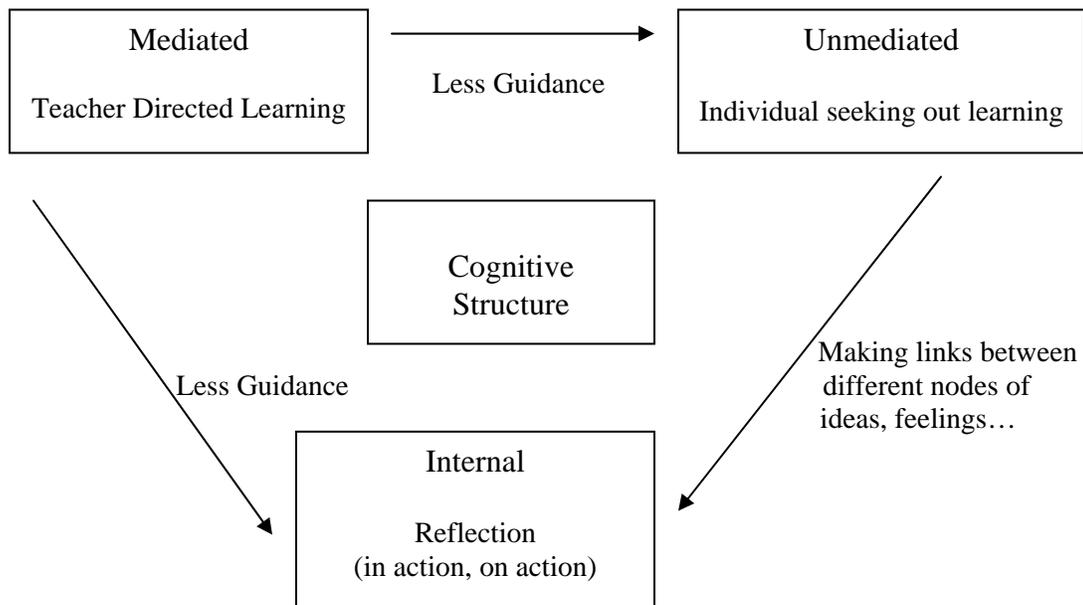


Figure 2. Network Model of Learning

Adapted, with permission, from P. Werthner and P. Trudel, 2006, "A new theoretical perspective for understanding how coaches learn to coach" *The Sport Psychologist* 20(2): 202.

Post Performance Evaluation. Post performance evaluation is another form of learning where situations are explored after they occur in order to learn from the processes and experiences (Schön, 1983). Post performance evaluation, otherwise referred to as debriefing, is a form of discussion that takes place following a competition to initiate progress to the next level of improvement (Hogg, 1998). Reflection-on-action could be another way of describing debriefing. The purpose of debriefing involves the sharing of performance information and holding accountable those responsible for the results (Hogg, 2002). There is a focus on all performance components including technical, tactical, physical, mental, and emotional.

The process of debriefing occurs when an athlete and coach engage in an evaluative activity. If performed correctly, the evaluative process can provide solutions and allow the athlete to feel certain about the next stage in their athletic career. Since the athlete and coach often will perceive performance outcomes differently, it is important that they understand their role in the debriefing process to help the athlete make sense of their competitive experience.

If a coach's primary concern is to see their athlete succeed, they must understand the importance of listening to athletes and respecting their thoughts and ideas (Orlick, 1989). The coach should also be responsible for providing knowledge of results and performance states. Following an event, athletes may need to be reassured about their potential and confidence as well as recognizing their present limitations (Hogg, 1998). Overall, the debriefing process should play a key role in helping the athletes see the positive aspects of a performance and heighten their beliefs about their potential for subsequent competitions.

The role of the athlete in the post performance evaluation process is to critically reflect on their performance in terms of their knowledge of competition and knowledge of results (Hogg, 2002). The athlete and the coach must be willing to express both internal (i.e. athlete mental state) and external (i.e. coach's decisions) sources that may have contributed to the performance outcome. If the athlete and coach work together, it can lead to creativity and add depth to decisions about future training and competition plans.

A key aspect in any debriefing approach is the recognition that a single formula or model is insufficient. Athletes have different needs based on their psychological make-up, the nature of the sport, and the type of performance outcome (Hogg, 2002). A difficult aspect of sport is experiencing loss or a disappointing performance. Orlick (2000), states that defeat can result in learning how to better prepare for future events. In these negative competitive experiences, the debriefing process can aid in a positive learning process and alleviate the feelings of self-doubt and guilt. An athlete's psychological make-up will be different following similar outcomes depending on their perspective. If an athlete develops appropriate perspective it can help in dealing with setbacks and challenges and aid in an athlete reaching their potential (Botterill & Patrick, 2003).

A Debriefing Model. Corresponding to the literature on post performance evaluation, Hogg (2002) presented a systematic model of learning for coaches. The debriefing model provides a paradigm for the interaction between coaches and athletes. Figure 3 illustrates Hogg's six-step model and identifies several key components that assist coaches in attaining new information and facilitating recovery for athletes.

The first step of the model involves selecting an appropriate time and place for debriefing. A number of factors can influence decisions such as the nature of an athletic performance and the personality of the athlete. Coach and athlete may decide on a more formal or informal structure to evaluate a performance. Timing can also vary from immediately after an event or much later so there has been more time to reflect. Step two involves the athlete conducting a self-analysis of the performance. This involves celebrating success and recognizing limitations. Coaches should also be responsible to reflect on their role in the athlete's competition. Step three is being open to an exchange on performance feedback. When discussing what needs to be done next, it is important not to dwell on the past and to look positively towards the future. Step four of the debriefing model involves determining the need for change. The important aspect of this step is that change cannot occur if the athlete does not acknowledge what must be changed. Step five involves setting new goals. Designing new goals should reflect a new vision and help recovery and motivation towards the next level of performance. The sixth and final step of this model views the athlete as being responsible for self-monitoring. Part of the athlete's regular training should include reminders of their major goals and responsibilities.

There are valuable concepts an athlete and coach can take from this debriefing process. However, this model is yet to be fully tested. A primary critique of the debriefing model would be an over reliance on a formal debriefing session and lack of recognition that athlete learning may take place in other situations. A systematic model will not always allow for unique, subjective experiences to situate themselves within an objective learning approach.

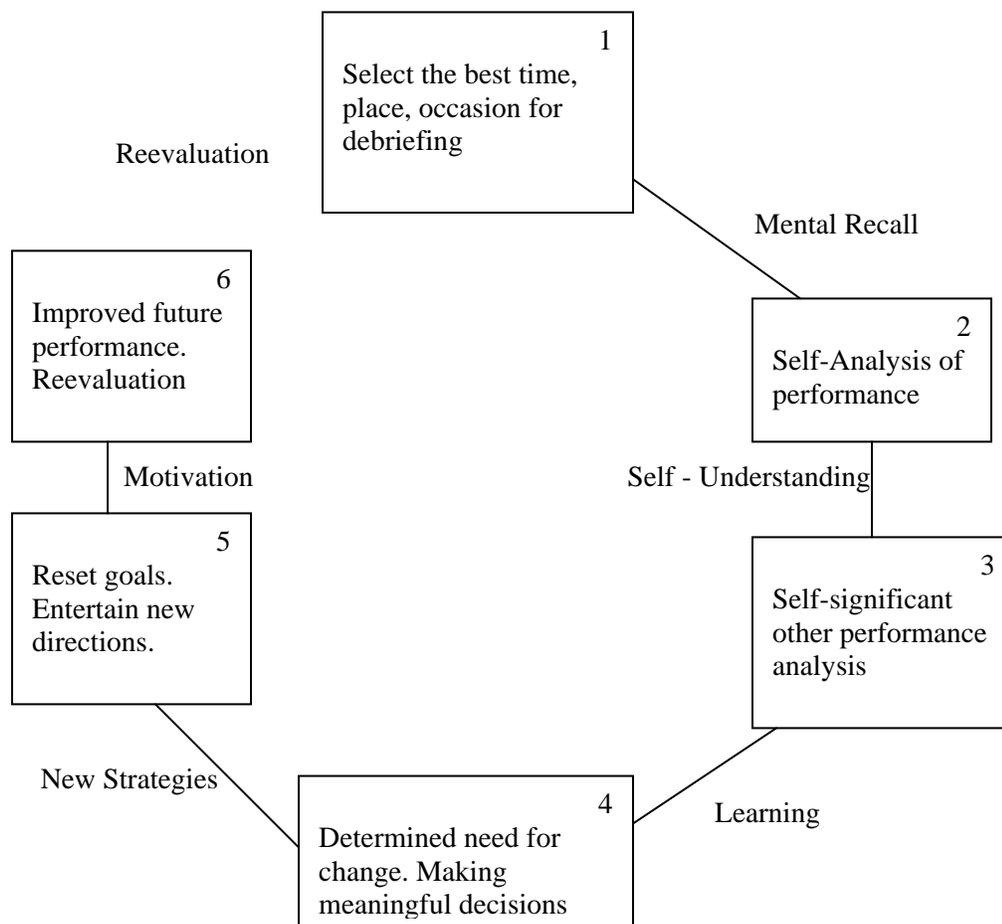


Figure 3. A Six-Step Debriefing Model

Adapted, with permission, from J.M. Hogg, 2002, Debriefing: A means to increasing recovery and subsequent performance. In *Enhancing recovery: Preventing underperformance in athletes*, edited by M. Kellmann (Champaign, IL: Human Kinetics), 187.

Situated Learning. Situated learning is defined as a learning process that occurs in a participation framework, rather than in an individual mind (Lave & Wenger, 1991). Learning is mediated by the differences of perspectives and experiences among the individuals participating. Learning viewed in this context can be chiefly informed by legitimate peripheral practice.

Legitimate peripheral practice is centered around the notion of a learner as they become a participant in a community of practitioners. These new learners or “newcomers” learn knowledge or skills and eventually move toward full participants in

the practices of a community. Newcomers learn from “old-timers” about activities, identities, artifacts and communities of information and practices.

Legitimate peripheral practice stems from the notion of apprenticeship. An education example of the community of students becoming teachers will assist in explaining the concepts described. University students (newcomers) enter a community of practitioners (university classes) and learn from old-timers (university professors). Newcomers move toward becoming full participants in the teaching community as they enter a school setting and learn from different old-timers (school teachers). This apprenticeship continues as students eventually become teachers and learn from the more experienced teachers that they work with.

Another aspect of apprenticeship is that newcomers eventually become old-timers. This process of transformation is integral to legitimate peripheral practice. In the example of students becoming teachers, the old-timers (more experienced teachers) will eventually be replaced by the newcomers in what is viewed as a developmental cycle. Lave & Wenger (1991) emphasize that in the reproduction of learning, learning can occur with intentional form of instruction (teacher directed) but is not in itself the source of learning.

An important feature of situated learning is the importance of the retelling and discussion that takes place between learners and their respective communities around performance events. This relates to the definition of situated learning that learning does not take place in an individual mind. Using a sport example, following an important competition it is important for the athlete (learner) to relive their performance with those

involved in their learning community (coaches, teammates, sport psychologist, etc.) in order for learning to occur.

A criticism with the concept of situated learning is the claim that learning does not take place in the individual mind. Situated learning relates to the concepts of learning taking place through reflection-on-action and reflection-in-action (Moon, 2004). In the athletic realm, athletes may experience learning during an event or reflecting on an event after time has passed. Learning occurs from direct instruction or through a participation framework. However, these forms of learning may not account for all experiences of learning.

Experiential Learning. Experiential learning is defined as a “process in which an experience is reflected upon and then translated into concepts which in turn become guidelines for new experiences (Saddington, 1992, p. 44). There has been an increase in experiential learning practice and research in a number of fields, especially within the education and professional development literature (Moon, 2004). A key proponent in this area of study is educational researcher David Kolb. In his experiential learning theory, Kolb (1984) suggests that the following four stages are involved in the gaining of genuine knowledge; concrete experience, reflective observation, abstract conceptualization, and active experimentation. Kolb also identifies the following four learning styles; accommodation (feeling), convergence (doing), assimilation (thinking), and divergence (observing). Knowing what learning style an individual is best suited to helps the teaching activities to be directed accordingly.

Moon’s (2004) conceptualization of experiential learning differ in a number of ways and specifically in two areas that relate to how athletes learn. First, greater

importance is placed on the reflection process. Moon (1999a) outlines a number of outcomes that can result from reflective practice including knowledge and understanding, a process of critical review, personal and professional development, and the making of future decisions. Reflection is encouraged in order to 'make sense of' and learn from an experience. This concept corresponds to the work of Schön (1983) who observed the value of reflective practice in assisting professionals in their field learn about and develop their practice. In sport, specifically at a professional elite level where success is often based on outcome of performance, reflection becomes an important component of development and improvement for elite performers.

A second aspect of experiential learning that Moon (2004) emphasizes relates to the learner as being active in the learning process. In elite sport, although athletes have the potential to learn in different ways, there is a greater attention on the physical aspect or learning through doing. At an elite level athletes can be more kinesthetically aware of their body than non-elite athletes (Muaidi, Nicholson, & Refshauge, 2008). This idea of being more aware of feelings involved with performance highlights the importance of athletes being active and self-directed learners rather than being passive participants relying on directed coaching in their learning and development.

Experiential learning is a form of action research that is a method of learning from experience (Streubert & Carpenter, 1995). An action researcher's goal is to study a certain practice with the key practitioners or members of that practice. For example, in education, the reflective practice would be centered on the study of exemplary teachers. In nursing, the research would aim at to uncover the practices and processes of excellent nurse practitioners. In sport, a research emphasis can be placed on the study of the

learning processes pertaining to elite athletes or coaches. To this end, Nesti (2004) stated that sport research and the field of sport psychology was appropriately situated for experiential learning research as it placed great emphasis on individual training programs and subjective experiences.

Determining a Theoretical Framework

Following from the literature review on learning theories it is important to provide justification for the theoretical framework for this study. Dreher (1994) stated that the most important aspect of constructing a research design was the consistency of the method with the purpose and research questions of the study. A qualitative research method was appropriate for this study since it situated itself in the natural world with the aim of interpreting experiences in terms of the meanings people bring to them (Thomas, Nelson & Silverman, 2005).

Qualitative research can be defined as a situated activity that locates the researcher in the world. It involves an interpretive, naturalistic approach to the world (Denzin & Lincoln, 2003). This type of research attempts to make sense of experiences in terms of the subjective meanings people bring to them. As opposed to quantitative research, a focus is placed on capturing the individual's viewpoint and developing a rich, in-depth description. The knowledge gained at the personal level can be extended to achieve "shared understandings of meaningful experiences" (Bain, 1995, p. 241).

Phenomenology

Phenomenology is a theoretical framework that is concerned with the illumination of essential meanings of an individual's lived experience regarding a particular phenomenon (van Manen, 1990). An individual's experience is comprised of different

structures that make their experience unique. Kerry and Armour (2000) state that when these structures are grasped in consciousness, they take on different meanings for an individual based on how their view of the world is constructed.

This paradigm has the potential to make a significant contribution to sport related research, as a common element in various athletic contexts is the need to investigate an aspect of the experience of self in sport (Whitson, 1976). Phenomenology can effectively capture the subjective experiences of athlete's performances and uncover how learning from the experience has helped them develop and perform as capable elite athletes now and in the future. The capacity for phenomenology to focus on the structure and meaning of a lived experience (van Manen, 1990) makes it an appropriate qualitative framework through which to explore the experience of athlete learning.

The Concept of Bracketing. Bracketing, or the suspension of theoretical presuppositions, is a key principle of phenomenology. Bracketing is defined as a technique where the researcher temporarily sets aside their beliefs so that they will not have any preconceived notions of the phenomena being studied (Denzin & Lincoln, 2003). In other words, bracketing attempts to ignore or suppress prior knowledge or beliefs about the experience being studied (LeVasseur, 2003). The German philosopher Edmund Husserl viewed bracketing as a technique employed in order to view situations from an unbiased perspective so that new impressions can be formed without interference from prior interpretations, experiences and prejudices. In order to truly examine what a person is experiencing, a researcher needs to suspend their ideas and eliminate the theoretical lenses through which they may presume to know what participants are experiencing (Smith, 1992).

Phenomenologist Max van Manen did not embrace Husserl's concept of bracketing. He argued that if a researcher tried to forget or ignore their knowledge or ideas about the subject, these thoughts would continue to involve themselves in the research process (van Manen, 1990). Bringing the researcher's experience of the phenomenon into the research process can enhance the study by familiarizing the researcher to the subject and the stages of phenomenological research. This perspective acknowledges the researcher's role in the research (Dowling, 2007). LeVasseur (2003) suggests that it is not an elimination of pre-conceived beliefs, but a temporary suspension of prior beliefs so that different perspectives and questions could emerge during the data collection process.

Phenomenology was adopted for this study as the research questions are centered around the notion of gaining a first-person description of human experience in the world of everyday human life (Giorgi, 1970). Dale (1996) discusses the value of existential phenomenology relative to the field of applied sport psychology. Proponents of this style view athletes as being directly connected their world whether it is in competition or training. Dale (1996), states that you cannot talk about the athlete without discussing their world. For these reasons a great deal can be learned from athletes when they are given the opportunity to share their individual lived experiences.

Summary

A number of theories and models of learning were examined towards situating the lived experiences of athlete learning. Although a number of learning models exist they remain largely theoretical and untested. In particular, there is a sizeable gap within the sport literature. Therefore, this study explored how athletes learn and whether certain

systematic models of learning would reveal themselves as a result of this study. To this end, a phenomenological case study approach was employed for this research.

In adopting a phenomenological paradigm, the researcher is not concerned with testing particular learning theories or whether results fit into specific models. Rather, participants are allowed to share their unique experiences regarding their individual learning processes towards uncovering the essential meanings associated with learning from their experiences and how they impacted their “becoming” capable elite international athletes. Implications from this study may be relevant to challenge traditional learning theories and performance evaluation practices as it relates to coaches, sport psychologists and athletes.

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Chapter 2: Manuscript

Exploring the Role of Experiential Learning in the Development and Performance of Elite Endurance Athletes

The majority of sport related research has focused on a cognitive or behavioral approach to learning (Nesti, 2004), in particular the acquisition of mental skills (Callow & Hardy, 2002; Chase, Feltz, & Lirgg, 2003). As applied sport psychology researchers continue to explore the usefulness of qualitative methods of inquiry, many propose that the essences of an athlete's life world be more fully understood so that the subjective nature of an athlete's "being in the world" can be incorporated into our understanding of how they experience and organize their learning through and from experience (Dale, 1996; Stambulova, Wrisberg & Ryba, 2006). An important aim of sport psychology research is to improve athlete performance. At an elite level, where athletes dedicate much of their daily lives to their sport, even slight improvements can make a significant difference. The learning process an athlete engages itself can have a significant effect on their development and eventual performance and therefore makes athlete learning an important topic in sport research.

Generally, the literature on learning from a cognitive perspective in the field of sport has been focused on post performance evaluation method often referred to as debriefing (Hogg, 2002). Debriefing is defined as a process that attempts to ensure accurate performance appraisal and closure along with full emotional and mental recovery (Hogg, 2002). Post performance research recognizes the need for athletes to reflect on and learn from an athletic event (Gardner & Moore, 2005; Hogg, 2002; Orlick,

2000). This debriefing view of learning may limit our understanding of how an athlete experiences learning.

There are several learning models available for coaches and athletes to evaluate the learning process. A sport specific example is a six-step debriefing model presented by Hogg (2002), which identifies several key steps that assist coaches or sport psychologists in attaining information and facilitating recovery for athletes. Another systematic model, developed outside sport, is presented by Moon (2004) and is referred to as the “Building a Brick Wall” model of learning. In this directed approach to learning the teacher (or coach) is primarily responsible for the teaching. A second learning model presented by Moon (2004) is described as the “Network” model of learning. In this model an individual learns in a number of different ways including mediated, unmediated and internal processes.

Experiential learning has become increasingly beneficial in a number of disciplines including nursing research (Carpenter & Streubert, 1995; Macnee, 2004) organizational research (Cassell & Symon, 1995), and educational research (Foran, 2005; van Manen, 1999). Although a few studies (Becker, 2009; Connaughton, Wadey, Hanton, & Jones, 2008; Devonport, 2006; Holt, 2003) have examined athletes from an experiential perspective, its representation is limited within the applied sport research (Dale, 1996). Nesti (2004) states that there is tremendous potential for this line of research as it places greater emphasis on subjective experience. Moreover, there is significant potential towards informing individualized athlete development through eventual tailoring of individual training programs and experiences (Orlick, 2000).

Traditionally, sport related learning models are presented as systematic models for coaches and athletes to evaluate performance. Interventions cannot be selected and successfully implemented without truly understanding the different needs and personalities of athletes (Gardner & Moore, 2005). However, learning models may limit our understanding of the way individuals experience learning. The purpose of this study was to understand the phenomenon of athlete learning, its impact on development and performance and whether learning can itself be placed within a specific theory or model. Obtaining information about the nature of learning experiences of elite athletes could have potential benefits for athletes, coaches, sport psychology consultants (and others) involved in the athlete's community.

Methodology

Research Design

The goal of this research study was to understand how athletes make sense of and learn from their competitive experiences. Dreher (1994) stated that the most important aspect of constructing a research design was the consistency of the method concerning the purpose and research questions of the study. Qualitative research was selected as it has been defined as a situated activity that locates the researcher in the world and involves an interpretive, naturalistic approach to the world (Denzin & Lincoln, 2003). This type of research attempts to make sense of experiences in terms of the subjective meanings people bring to them. As opposed to quantitative research, a focus is placed on capturing the individual's viewpoint and developing a rich, in-depth description. The knowledge gained at the personal level can be extended to achieve "shared

understandings of meaningful experiences” (Bain, 1995, p. 241). This method was used in order to effectively capture subjective experiences of top-level athletes.

Theoretical Framework

Phenomenology is the paradigm that guided this research. Phenomenology seeks to uncover an understanding of individual lived experiences. Specifically, the natural lived meaning of the experience is what is studied (Carpenter, 1995). The tradition of phenomenological inquiry is based on the principle that there are essential structures to every individual experience (van Manen, 1990). Each experience is comprised of different structures (or cognitive frameworks) that make the experience unique. Kerry and Armour (2000) suggest that when these structures are grasped in consciousness they take on different meanings for an individual based on how their view of the world is constructed. The goal of phenomenological research is to capture lived experiences in order to better understand or establish the meaning of an aspect of human experience in question (van Manen, 1990).

The research design followed a case study approach. Case studies are a form of descriptive research in which a single case is studied in-depth in order to obtain a better understanding of a topic and when appropriate, compare with similar cases (Thomas, Nelson & Silverman, 2005). When interpreting phenomenological data, a thematic analysis of each participant’s experience is conducted in order to capture individual features of the experience for each participant. For this study, each participant represented an individual case that was then analyzed and compared to other participant cases consistent with the hermeneutic circle (Dale, 1996).

Data Collection

When producing a lived experience description, it is important to avoid generalizations and focus on a specific example or a critical incident (van Manen, 1990). Attaining an elite athlete's description of a critical incident (important competition or another significant situation) allows for a more aware portrayal or reflection on the feelings, moods and emotions of the event. Once the researcher has gathered a series of descriptions, the descriptions are used to reveal the essences of what it is like to experience the situation being studied.

The Researcher as Participant

Self-Reflection. A logical starting point for phenomenological research is to reflect on one's own experience pertaining to the phenomenon being studied (van Manen, 1990). Although phenomenology attempts to view situations from an unbiased perspective (Levasseur, 2003), many have argued that it is essential to recognize that the researcher will bring their own personal lived experiences and assumptions to the experiences being studied. While these can be temporarily suspended during the collection and interpretation of the participant's experiences, the researcher's own lived experience can positively contribute to the data analysis and interpretation of the various meanings that are revealed as result of the researcher's personal knowledge of the participants descriptions of their individual lived experiences. To this end, I felt it important to acknowledge my own personal experiences so that a transparent understanding can be achieved regarding their influence during the research process.

Along the journey of developing into a competitive athlete at the provincial and national level I have had many learning experiences. The personal narrative that follows provides my perspective on the phenomenon being studied. The narrative was directed by the same guiding question that participants were asked during the interview process. Can you tell me about a specific incident that occurred before, during, or after an important competitive event that had an impact on how you approached your sport?

The Incident. A competition that stands out is a marathon event near the beginning of my running career. Prior to this race I participated in two other marathons. In both events I had a disappointing result as my pace slowed significantly in the last ten kilometers. As race day approached for my next marathon I was extremely confident that this marathon would go better due to the training I had completed in the months leading up to the race.

During the initial stages of the race I was running on my own, sticking to my pace and feeling extremely comfortable. As I checked my time at the halfway point I was encouraged but also apprehensive as I knew the most difficult part of the race was ahead. As the race progressed my confidence remained at a high level as I passed a number of runners. At this point I remember thinking about my past marathon experiences where I was the runner being passed as my pace slowed down. Needless to say the feeling was much better passing competitors as the miles passed by.

Although this race occurred a number of years ago it remains the best I have felt during the final miles of a marathon. Athletes talk about being in the zone as they

experience the feeling of separating mind from body, letting your body do what comes naturally and being unaware of what is going on around you as you are focused on your task. Although I was conscious of my surrounding to the extent I could see my family in the final kilometers and feel the onset of pain and cramping, I was as close to being in the zone as I have ever been in a marathon race.

The most vivid moment of the race occurred after I made the final turn and saw the finish line. I knew at that point I was going to have a result that met the expectations my coach and I knew I was capable of. During these final few hundred meters I allowed myself to enjoy the moment and remove myself from the focused state I was in. Crossing the finish line and being able to stop was tremendously satisfying as I could begin to alleviate the pain and cramping that I became very aware of and also fully appreciate my personal accomplishment.

Learning from this Incident. When reflecting on this marathon, it was difficult to identify a single specific incident that impacted me. Rather, the satisfying outcome was significant as it confirmed a number of training approaches I had changed leading up to the event were working and also impacted how I pursued my athletic aspirations following the race.

In preparing for this particular marathon the most important decision I made was seeking out a coach. Prior to this time I was primarily self-coached and without a background in running my training lacked guidance and focus. My coach taught me many lessons that impacted my progress as a runner highlighted by the various components of

direction, dedication, and hard work that allowed me to reach my potential in the marathon event at that stage in my athletic development. I also recall gaining a significant amount of confidence from training with other athletes for the first time and being challenged by my coach, which allowed me to complete workouts I did not believe I could accomplish. Learning confidence from training allowed me to approach the start line of the marathon with a positive mindset both physically and mentally.

The marathon race itself provided learning opportunities during the race. One of the reasons this study focused on endurance sports was to explore the possibility for athletes to reflect or learn in action. In my previous attempts at the marathon distance I struggled considerably in the last few miles. During this particular marathon as I continued to run strong through the later stages of the race I recalled not only how much I had progressed physically through all the elite level training I had completed but also how my mental focus helped me overcome difficult periods in the latter stages of this race. As I took time in the last few hundred meters to enjoy my accomplishment I recall actively taking myself away from the race and letting myself realize that all my hard work had come to fruition.

This marathon experience also had a significant impact on how I pursued my future running ambitions. With the confidence that I had gained from the positive performance not long after this race I decided to move across the country to pursue my running in a more favorable location, committing to dedicate more of my time to the sport. I consider this move a risk at a time in my life that took me away from my family and a stable job. The learning I have gained through this risk has been immense. The

experiences and opportunities I have received in my running endeavors have been some of the highlights of my life and have been a major factor in my development as an athlete.

Another significant learning experience I had following my successful marathon related to a change in perspective. My outlook towards racing and training changed from enjoyment and relaxation prior to this marathon to feelings related to being tense and fearful of failing in subsequent races. This negative mindset which resulted from achieving a certain degree of success did not allow me to perform as well and changed my outlook towards training and racing from enjoyment to being more of a burden. In order to regain a more positive attitude I not only learned from previous races but also from seeking out the council and advice from members of my learning community including coaches, sport psychologists and other athletes.

The marathon event that I have discussed as a critical incident that had an impact on how I approached my sport and developed as an athlete was significant in itself but just as important were the learning situations surrounding the race. Reflection on the race allowed me to understand that my learning experiences as an athlete have been diverse and taken on many different forms.

As the primary researcher in this study I brought many pre-conceived notions to the research process. As an athlete I have had personal athletic experiences that affect how I interpret and view what other athletes go through. Through these personal experiences, I undoubtedly entered the research setting with a biased perspective about how the participants have experienced learning. From a phenomenological perspective, I recognized my prior knowledge, beliefs and feelings about the research topic in order for the reader to be aware of how they may impact the interpretation and analysis of the data

Recruiting Participants

In accordance with phenomenology theory, the sample size was small so each individual experience could be analyzed in-depth (Carpenter, 1995). I used purposeful sampling as this type of sampling allowed me to identify participants who are living or have lived the phenomena being studied.

The initial step in recruiting participants was sending a letter of invitation (Appendix A) to prospective athletes. The letter included a description of the purposes and procedures of the study and the expectations of participants. Individuals who agreed to participate were sent a letter of information (Appendix B) that further explained the study as well as assuring participants of their confidentiality throughout the research process.

Three criteria that were used to select participants that directly related to the purpose and research questions. First, elite athletes were selected. With phenomenological research it is important to obtain information rich cases that will provide sufficient depth of information based on experience (Patton, 1990). Athletes competing at a high level are able to provide descriptions that contain detailed information based on their expert knowledge (Holt, 2003). Second, this study focused on elite endurance athletes in the sport of triathlon. Elite triathletes were selected because of convenient access to high-level athletes in this sport. Third, participants must have direct experience with the phenomena of interest and be able and willing to express themselves. Elite athletes have competed in numerous critical athletic events. Participants included four elite level triathletes (3 female; 1 male) who are all competing (except for one participant who recently retired) at an international level.

I used the unstructured or open-ended interview method as it is the chief mode of inquiry in phenomenology. According to van Manen (1990) the phenomenological interview serves two specific purposes: First, as a means to gather experiential material to develop a deeper understanding of a human phenomenon, and second, as a vehicle to develop a conversational relation with the interviewee about the meaning of an experience. This type of interview, which views individual experiences as distinctive does not have a list of pre-determined questions. This approach allows participants to describe their experience as they lived it. In this conversational style interview it is important to ask a person to focus on a specific instance, situation, or event (van Manen, 1990).

Following from these guidelines the initial interview question for this study was: “Can you tell me about a specific incident that occurred before, during, or after an important competitive event that had an impact on how you approached your sport?” My aim was to ask for clarification or ask follow-up questions that allowed the participant to meaningfully and rigorously describe their experience of learning surrounding this event. An interview guide (Appendix C) was brought to each interview to assist the interviewer in keeping track of essential information (name of interviewee, date, location) and remember key prompts to assist in the interview process.

In order to gain experience and confidence in the phenomenological interview process a pilot interview was conducted with a former elite level triathlete. This interview was completed by telephone. Prior to starting each interview participants were reminded of the purpose of the study, asked to sign a consent form (Appendix D), if it had not been signed in advance, and verbal consent was gained for the recording of the interview.

Also, participants were reminded that their identity would be kept anonymous throughout the research process.

Three of the participant interviews were conducted face-to-face at different locations suitable for participants (home, coffee shop). Due to logistical reasons one interview was conducted by telephone. Interviews ranged from 30-50 minutes in length. A follow-up interview was completed with one participant, where the first interview by telephone was not expansive, that elicited more information. At the conclusion of each interview, participants were reminded they may be needed for a follow-up interview and would be sent an analysis of their interview transcript to provide consent of the researcher's interpretation.

Data Analysis

Following data collection, interviews were transcribed verbatim. Data was subjected to a phenomenological thematic analysis (van Manen, 1990). Themes are defined in a number of ways including “the sense we are able to make out of something” (van Manen, 1990, p. 88). In order to “make sense” or uncover themes for this study a selective reading approach (van Manen, 1990) was used. This method involved reading the interview transcript several times to determine what statements or phrases seemed particularly essential or revealing about the experience being described? These statements, or meaning units, were circled, underlined or highlighted. For each participant, the meaning units were organized into themes. The themes were then compared to other participant themes to determine central themes. Participant quotes, phrases, sentences, or part sentences were gathered in order to capture the essences of the central themes. To ensure the accuracy of analysis, central themes and meaning units

were continually referenced against the original data (Dale, 1996). Following this thematic analysis a final step to the analysis process was to provide a narrative, a detailed description of the data in order to obtain the structure of the experience (Giorgi, 1989). This narrative is presented in the results section.

Trustworthiness of Data

A number of techniques were used to provide evidence for the trustworthiness of the results. First, peer debriefing was used with the data analysis by other researchers who were familiar with the research study and had expertise in the qualitative method of phenomenology. Second, the data analysis was sent to participants for member checking to determine whether they agreed with the statements they made in the interview process. (Thomas et al., 2005). Third, as suggested by Kvale's (1983) phenomenological interpretation approach, the interview transcript was condensed as central themes were interpreted by the researcher during the analysis of the data. This initial thematic analysis was then sent to participants for feedback. Participants were asked to check over the analysis to ensure my account was accurate and to add any additional information they felt necessary. In all instances, participants agreed with the analysis and did not add any new information.

Results

The results are organized into four segments corresponding to each participant's interview data. The aim in presenting each participant's lived experience was to provide rich, descriptive data for each unique experience (van Manen, 1990). Therefore, each section features participant's voices, which highlight the researcher's narrative.

Following each narrative there is an interpretation of the participant's story. The interpretation is an analysis of key themes that emerged from the data.

Participant #1

The first interview was conducted with a triathlete who has had a very successful career including victories at major championship races. When asked to discuss a specific incident that impacted how he approached his sport, he shared about his decision to separate from a coach and take on personal ownership of his training program. This decision resulted from a prolonged period of disappointing results and injuries. He began by describing events leading to his coaching change and how this low point in his career provided a time for reflection and change.

At the beginning of [year] I wasn't in a great spot. I wasn't having the results that I wanted to have. And I was a bit lost and I didn't know which direction to go in. I kind of hit a bit of a bottom in the sport. ...I think that really forced me to take a look at myself and take a look at how I was approaching it and how I wanted to approach it moving forward.

This athlete expressed the importance of reflecting on negative circumstances before deciding how to approach the next phase of his career. "I took a couple weeks off. I remember it was December 1st or whatever. I started training again and was so focused."

He spoke of his twenty-plus years of experience in his sport and emphasized his belief in the value of coaches but also the importance of reflecting on what is good for the individual athlete. He discussed the coaching he was receiving at the time he decided to make a change.

Intuitively there were things that didn't feel right, and I believe that in sport particularly there is a really case to be said for just giving in to what the coach says and if it's a good coach hopefully what there telling you is the right thing. But intuitively this one wasn't telling me the right thing. So I decided to leave that coach. And I will say he was a great coach – still is. Just wasn't resonating with me ... I'm going to make my own program.

He emphatically stressed that “as an athlete you have to get to a certain point that you have to be aware of yourself, regardless of who is working with you because nobody, nobody, nobody knows you better than yourself.” Since this period of self-coaching, which culminated in a major victory in the season that followed, this athlete has once again recruited the advice of coaches, however he viewed this time in his career when he was without a coach as an important outlook on his coaching philosophy.

The biggest thing I learned from that year is to really look internally and say how do I feel and what can I do today. And surprisingly I was able to push myself incredibly hard on most days but when I needed to take a break it was easier to take a break. I didn't need to impress a coach or anything.

As the conversation progressed the athlete spoke of his successful season that followed his decision to develop his own training program without the guidance of a coach. One of the major philosophies he applied was to listen to his body and take a recovery day when needed rather than sticking to a structured program with preset recovery days. Although his training and racing season was going well he expressed the importance of experiencing success in his major race of his season to confirm that his new approach had worked.

That year ended up being a very solid year and I won (major championship event) at the end of that year. And that was the most defining result so far ... it just confirmed that if I just listen to myself a bit more that good things happen.

This participant also talked about how this disappointing period in his career prior to his decision to coach himself enabled him to develop a healthier perspective leading into his upcoming season.

...when you're feeling sorry for yourself and then I remember thinking I'm pretty damn lucky first of all ... I had to smack myself in the head, and say [expletive], its not that big of deal, it feels like that when its you and you're in it.

This outlook carried over to a positive approach at a future competition. Prior to this important race in which the athlete was feeling confident resulting from a good training period he expressed: "I knew I was going to win but I didn't care. I was saying I don't care. It was like it didn't matter in the whole scheme of things. And I wasn't afraid either way."

He described a competition, which he describes as a highlight performance of his career, at the end of the season in which he had taken personal ownership of his training program. In discussing this particular race he began by describing the importance of positive feelings prior to a competition. This included having an appropriate level of arousal, being in the moment, and not being concerned with the outcome.

I remember that race morning all I was, was excited to go because I knew good things were going to happen. In hindsight it wasn't like I knew I was going to win, it was like I couldn't wait to race. No matter what happens I'm going to win.

It was weird. And I think all that was, I was just letting go of worrying about the outcome. I didn't care.

Reflecting on his victory in this major competition he described his feelings during the race.

To this day it was the easiest race I've ever had. And of course when you have a win, you remember it was easy but I think it really was. It was just so like, easy.

There was never a point where I was remotely anxious ...

He spoke of the confidence he had going into this championship race. In a race he eventually won he recalled having a significant lead and what he was thinking at the time: "I can remember distinct instances in the race when I would remind myself to trust that what I was doing was the right thing."

As the conversation with this participant came to a conclusion the athlete thought back to the incident of his coaching change and that time period in his life. During this low point in his sporting life he thought about how his search for new knowledge brought him to areas he did not think he would find himself involved with.

I was sort of mentally mixed up and I read some books that you know I probably wouldn't have in a million years ... because they are like in the self-help section.

And I don't need help. But I realized that I kind of got to the point that I sort of let go of that.

He went onto explain how this unique approach to taking a learning initiative as an athlete helped his mental attitude going forward into the next phase of his career:

What I got from the book that I found cool was that just the idea, there is the insane part of you that's like you're ego. I was like finding myself getting caught up in that ... I read his stuff and all it did was give me way more peace.

Interpretation for Participant #1

As an athlete with over twenty years in the sport of triathlon, the interview conversation led to a diverse range of learning experiences relating to this participant's development as an elite international athlete. An analysis revealed a number of themes, which will be discussed in the following section.

Personal Ownership of Coaching. The initial incident the athlete discussed which had a critical impact on how he approached his sport was the positive impact and performance results that followed a decision to take on greater responsibility of his training program. The personal ownership of his training remained a key theme throughout the conversation. The participant's dialogue relates to a statement by Orlick (2000) who asserts that a major criticism about coaching by experienced athletes is the coaches' failure to listen and act on the athlete's ideas. The athlete stressed the value of coaches in his development but felt that at this stage in his career taking personal coaching responsibility played a critical role in his progress as a successful triathlete.

Gaining Perspective . Gaining perspective was a second theme that emerged as a factor in this athlete's development. For this athlete perspective related to the outlook he had on his sport. Developing a more appropriate perspective toward the outcome of an event freed him from anxiety and gave him more peace that allowed him to perform at a higher level. His new outlook developed during a frustrating period in his career caused

by injuries and disappointing results where he realized his outlook on his difficulties was having a negative impact.

Learning through Disappointment. A third theme related to learning through disappointment. This participant dealt with an injury plagued season and a series of poor performances. Reflecting on his disappointing year led to a different approach as he prepared for the following season. One of the key elements of taking personal ownership of his coaching was being sure to pay more attention to how his body was feeling, taking a day-off training when he needed to, and not question his motivation. He was able to deal with his setbacks and grow from them. The lessons learned through his setbacks contributed to his next season being very successful.

Learning through Competition. A fourth theme was learning through competing as it was viewed as an important factor in confirming that the athletes new coaching philosophies were producing positive results. The participant discussed his feelings and thoughts surrounding a critical competition. He began by describing his pre-race feelings, which included excitement, confidence, and not being anxious about the outcome. During the race he explained how he had to remind himself to trust his race plan. In this major competitive event which this participant won, he described the ease of the race experience and how this feeling as a unique phenomenon for athletes. Through this race he was able to confirm that the risk he took to take personal ownership of his training program was a positive and important step in a race, which he described as his “most defining result”.

Seeking out Learning. A final theme that resulted from the interview analysis was seeking out learning. While discussing his frustrating season he acknowledged the

difficulty in emerging from this low point in his career. An avenue of learning, which he sought out on his own, was the advice offered in certain self-help books. This athlete explained how he never thought he would resort to assistance from this type of resource. He admitted that the learning that occurred played a significant role in changing his mental approach and allowed him to come out of this negative period.

Participant #2

The second participant was an accomplished athlete and despite her young age she had already experienced international success in her sport. Due to the participant training in another country at the time of data collection the interview was conducted by telephone. Compared to the in-person interviews, this interview proved to be more of a challenge. After the initial phone conversation a follow-up conversation helped strengthen the quality of the data.

The incident this athlete discussed which had an impact on how she approached her sport dealt with a circumstance where she believed she was unfairly not selected for her country's national team.

Triathlon Canada came back and said that I couldn't race because I was a couple of months too young ... that kind of was my first disappointment and I used it as a positive thing. So I kind of took that attitude that you could take something positive from a disappointment.

She went onto to describe how this positive attitude motivated her to train harder and helped propel her to a successful season.

The conversation transitioned to a discussion about performances (racing and training) that had an impact on her approach as an athlete. She discussed how successful

training provided her with confidence prior to an important race. “I was training really well leading up to the race. I was improving really quickly ... everything was going almost perfectly leading up to that race.”

She proceeded to discuss her feelings prior to a particular competition and how she believed her attitude impacted her positive result.

I just remember being really relaxed. I was just excited but not really nervous.

Yeah, I think when we were lining up to head out to the start line everyone looked really nervous except me and two of my friends. We were the only ones like joking. We were all just joking around and really relaxed.

This athlete was a relatively young competitor on the world scene. She spoke of her unexpected victory and how the confidence from this performance assisted in her development.

I actually ended up winning [major race] so I had some confidence of course from that race ... before I used to just be star struck the whole race. But I found myself thinking I was one of them and I was more confident.

The interview moved from discussing the impact of positive competitions to the effect of negative experiences. She described an event where she was in a position for a victory before collapsing in the final stages of the race. Similar to the initial incident she discussed about of being left off a national team, she expressed the value of taking positive aspects from this negative circumstance. “I don’t think it really impacted me negatively at all, it was just a big confidence builder.” She expanded on the learning she took away from this race:

The other type of learning would have been during the day of the race, that evening and couple weeks following just learning to get over the fact that I was so close [to winning] ... learning to like to focus on that part and to just keep that confidence that I learned during the race and that I could do it again.

The positive lesson she took from this race was her ability to compete with the best in the world at the front of a race. Taking the positives from this unfortunate circumstance she was able to move forward and win her next race.

This participant brought a perspective of a young athlete who was rapidly improving and discovering her potential as she talked about her general learning experiences from races.

I usually learn that I can do something that I didn't know I could do ... I proved to myself that I could be with the best in the world and I could compete with these girls that I looked up to so much. And then I just expected that from myself from then on ...

A final aspect this participant discussed as an important factor in her development as an elite athlete was learning from more experienced athletes.

I've always been the youngest in a group of pretty mature athletes. So I've learned from them through my whole career. ... All these renowned athletes and I've just kind of watched what they have done. And always learned that you have to do is what is best for you.

These more experienced athletes influenced this participant in a number of aspects including allowing her to see what it takes to succeed at the top level in her sport.

Interpretation for Participant #2

Compared to the other participants in this study, this participant offered the perspective of a younger athlete. Not having the years of competitive experience of the other athletes may have influenced the depth of topics discussed, however the themes that emerged from this participant's lived experiences provided the unique outlook of this younger successful international triathlete.

Learning through Disappointment. This participant talked about two disappointing situations and how she responded to them. The first situation dealt with not being selected to a national team and the second involved collapsing near the end of a race in which she was in contention to win. Reflecting on these negative experiences she only expressed positive lessons. The first circumstance she used as a motivator to train harder and through the second situation she gained confidence that she could compete with the best triathletes in the world. In discussing these incidents she illustrated the importance of taking the opportunity to learn from potentially negative circumstances.

Learning Through Risk-Taking. As a younger competitor on the international scene, this participant was racing against more experienced athletes she looked up to and admired. This talented athlete contributed part of her success to having the confidence to take risks and challenge herself to race with the top competitors in her sport. Taking risks allowed her to gain confidence and being in these situations eventually allowed her to not just compete with the best competitors but win races at the top of her sport.

Learning through Competition. The theme of learning through competition can be divided into the two sub-themes; developing appropriate perspective and gaining confidence. This participant discussed one of her important competitions and recalled

how her feelings of being relaxed and excited prior to the race as opposed to feeling anxious and nervous. She also talked about not feeling pressure prior to this competition. She attributed this mental approach to developing an appropriate perspective towards her sport and enabling her to perform at a higher level.

A second aspect of learning through competition was gaining confidence. At her young age this participant quickly learned that she was able to compete with the best in the world. The confidence, which she developed through her competitive experiences, allowed her to realize her potential as a triathlete against top international competition.

Learning from Other Athletes. A final theme which influenced this participant's development as an athlete was learning from more experienced triathletes. She talked about being the youngest athlete in a training group consisting of accomplished competitors. Being able to learn from observation and interaction on a daily basis was a factor that she believed to be crucial to her quick development as one of the top athletes in her sport.

Participant #3

The third interview was with an athlete who had recently retired following the [major international competition]. The incident that initiated the conversation was a victory in an international race. Not only was the result her first world cup win but it also enabled her to qualify for her country's Olympic team. She began by describing her feelings prior to this race as a "relaxed but energized feeling at the start line ... I was confident but not overly."

This participant who had a number of years of international experience went on to talk about her feelings during the race. She described how she felt in the following way:

You want to have that one race where everything just falls together and it feels just completely effortless and feels like you're almost outside of yourself. I definitely had that feeling ... I just had this smile on my face ... I was excited to be in that position ... I haven't been in that position often ... but it just felt so easy ... it was just effortless really.

At this later stage in her career she described the effect this successful performance.

I think confidence wise I finally felt I belonged in that event and in that sport and all the time I put into it. I think I always questioned whether I was worthy in being in a world cup race and I didn't want to just be there to show up. I guess it just allowed me to have the confidence to feel that I belong here ... so that was a big step for me to actually have that belief in myself.

As the interview moved towards discussing the events surrounding this race, the participant discussed how a coaching change at the beginning of her season was a major contribution to her improvement and eventual world cup victory. She stated that "... significant shift in my training was when I had a new coach. He really changed the way I thought about everything. So it kind of started when I switched coaches." Even at a later stage in her career a change in training philosophy allowed her to train and race with a new approach.

He (coach) would say to me, I'm not going to look at your number (time), and of course you do but he would say I'm not going to ask you your placing and I'm not going to ask you what your time was but I want to know that you put absolutely

everything on the line at the end of the race. That was truly what he tried to instill in us.

This athlete also expressed how she learned from her new coach to train in a more professional manner.

That philosophy of being on the line and knowing that you've done absolutely everything you can to get there and be as fit as possible and not just from training hard but every aspect of it. So mentally you're prepared and just confident.

The success this athlete experienced in training and recalling that success was discussed as another important aspect of performance (in training and competition) achievement. Competing in races leading up to her world cup victory she spoke of the confidence gained from her training. She realizes she "... had the ability to be on the podium and place well but I just hadn't done it." She also spoke specifically of the improvements she made in the biking component of her training. "I knew that with the cycling I'd been doing it just didn't matter where I was (in the race) that I could make it up (the distance)."

The conversation with this athlete concluded with a discussion on the perspective she developed reflecting on her athletic career. She began by explaining how learning from her experience as an athlete related to her views on life in general.

I think to have a balance and to have other things to do is really important because after all it is sport. We are not saving lives ... it should be fun and there are definitely hard moments and there are things that you don't always want to do but at the end of the day you have to love what you're doing.

In the later stages of her career, this athlete spoke of trying to instill a positive perspective to younger athletes by stressing the importance of a balanced life as an athlete. “In the long run you’ll have a better perspective on life if you actually open your eyes and look outside that bubble of sport because it’s a pretty cool place out there which I’m starting to learn.”

Another issue related to having an appropriate perspective was the lesson this athlete learned about placing too much emphasis on performance results, which often took away from the enjoyment she had for her sport. She explained how she was able to apply the perspective of her new coach to enjoy more success in her training:

... it’s kind of like having a good perspective. If you don’t have a good workout one day then it’s not the end of the world and just to be able to kind of take a breath and know that it’s going to be okay if you work hard.

Interpretation for Participant #3

The interview with this participant provided the viewpoint of a recently retired professional athlete. After many years in the sport of triathlon, the critical incident she discussed that had a significant impact on her was her first world cup victory which had extra significance as it qualified her for her country’s Olympic team. The central themes that emerged from the interview relate to this particular race and the time period surrounding the race, which occurred near the end of her competitive career.

Learning from a Coaching Change. At a later stage in her career this athlete was still searching for ways to improve and reach her potential. Learning from a new coach and adopting his philosophy was discussed as a significant factor in her development. Specifically her world cup victory, which highlighted her final competitive season, was

attributed to the lessons she was learning under her new coach. She explained the new lessons she learned both physically and mentally allowed her to improve and reach a new level in her sport.

Learning Confidence from Performance. Gaining confidence from performance can be divided into two sub-themes; confidence from training and confidence from competing. As a veteran athlete who was still seeking her first world cup victory she admitted to questioning her belief in herself as to whether she belonged in races with the best athletes in her sport. Leading up to her race victory she talked about gaining confidence through the positive training results she was experiencing under her new coach. She also spoke of gaining confidence from races preceding her world cup win. Although she did not have the results in these races she was hopeful as she was able to see improvements that increased her belief that she was close to having a significant breakthrough.

Learning from Success. This participant went into detail in describing her thoughts and feelings surrounding her world cup victory. She began by explaining her feelings prior to the start of the race as confident and relaxed yet also energetic. She described how the race was unlike any race she had previously experienced. The feelings during the race were illustrated as effortless and being outside of herself. She also spoke of getting into a position during the bike portion of the race where she knew she was going to have a successful performance. Although she expressed how the feelings she expressed in this race are rare for an athlete, the race had a tremendous impact on her as it was a culmination of years of dedication to her sport. Specifically this victory confirmed

the lessons she had applied under her new coach in the months preceding this world cup race.

Gaining Perspective. A final theme discussed by this participant was the importance of developing an appropriate perspective. As a retired athlete reflecting on years of experience as a professional triathlete she believed as her perspective developed she was able to make positive strides as a competitor. Perspective in sport related to developing an appropriate attitude towards a disappointing training session or race and not letting it effect future performances. She also discussed the importance of having a balanced lifestyle as a professional athlete in terms of not taking yourself and your sport too seriously. She believed these lessons are important in the development of capable elite athletes and keeping young athletes passionate and involved in sport.

Participant #4

The final interview was with another experienced athlete who has competed at an international level for a number of years including representing her country at the Olympics. When asked to discuss an incident that impacted her approach to her sport, she began by talking about a coaching change. She described a disappointing season that led to her decision to seek out a new coach and the difficult transition the decision was.

For me it was just this taking this huge risk ...I packed up and left Canada, left my boyfriend and moved to [another country] not knowing her, not knowing anyone I was training with ...just jumping into this completely new program and really just having no fear and taking a chance. So when I look back on the last few years that's absolutely the one thing that stands out that got me to where I am today and what I still use every day.

Reflecting on this decision to change coaches she describes it as "...the biggest learning experience or event that changed my outlook was switching coaches and working with a new coach ... she just taught me how to work hard and how to take risks."

The coaching change led to a new philosophy in aspects of training and racing that had been instilled in this athlete from previous coaches. "It was completely different. Everything, like her approach to training ... there wasn't a lot of structure ... with this new coach it would be train until she looks at us and says you guys need a rest day." The change in philosophy instilled a new confidence that produced a new attitude in training and competition. "It was just confidence in my training and knowing what I had done and was prepared. Like our saying was leave no stone unturned. And we really did put in the work." This participant went on to express the importance of her coach's belief in her. "She let me believe that I could make great things happen regardless of what happens in a race ... like the attitude, champions make it happen."

This athlete provided a specific example of how her coach's approach taught her that she could compete with the best swimmers, a component of the triathlon she had struggled with in the past. "So that's sort of the philosophy that she tried to instill in me. You don't have to look pretty and you can swim with those excellent swimmers." The athlete expressed how just hearing this from her coach enabled her to take a new approach in her training and competitive events. Transferring this approach to a competition, her positive mindset allowed her to perform better than in past situations.

There was a little gap in front of me and all those women and then those behind me. I remember just putting my head down and thinking I can close this, I can

close this. I remember in the past I would just wait for someone else and think okay I'm in the second pack.

Reflecting on the season under her new coach, this participant expressed two aspects of her coach's philosophy that helped her in both training and competition. The first aspect involved the approach of finding a way to make it happen.

That's the approach my coach took. So I applied that to my training sessions, like finding a way to make it happen and to racing as well. And that was a total turnaround from the previous years where I would like give up or pull out of a race.

She also discussed the importance of not worrying so much about how you feel the day before or the days leading up to a race.

That was a big thing I learned that year and in the past that would have freaked me out. Like if I went for a run and my legs felt bad the day before then oh my god the day is messed up ... And just kind of being in the moment, like I don't feel good now but I can turn this around, my body might come around.

This mental approach and confidence instilled in her by her coach enabled her to be more relaxed and focused on the race, which she expressed as being a major concern in the past.

She went onto talk about the importance of developing a stronger mindset. "It was important in the sense that I just learned that not everything has to go right to have a good day. And so that was like a turning point for me." She referred a number of times to this aspect of learning from experience that every part of a race does not have to go well to produce a positive outcome.

How I feel doesn't necessarily correlate to how I'll do in the end. I could feel terrible and be running at my best. I could feel bad on the bike and then good on the run. I could have a terrible swim and then another great bike, run.

She described her perspective as "being in the moment" and realizing that if "I don't feel good now but I can turn this around, my body might come around."

This perspective relates to the importance of developing an effective viewpoint. This athlete considered this to be a critical learning moment in her performance both in training and racing. In training the lesson was realizing if she was not feeling good prior to a workout she still may be able to have a good training session. In racing the lesson was recognizing if she was not performing well during one section of the race she was still capable of having a good overall result.

I think it was through the training that I gained confidence. We would go into hard sessions completely smashed and do great. And I was like oh my god, I was like running or biking better than when I was fresh last year. Umm, so it was just the whole different mental approach to training and to racing too.

The conversation transitioned from the positive coaching change and the new philosophy that transferred to races in the season that followed. This participant began by describing a new attitude that enabled her to have a more enjoyable outlook: "... that whole year my goal was to be as nice to myself as possible. I'd just come from a year of tearing myself mentally apart in races. No matter what happened I was going to be nice to myself." This athlete went on to have a successful season and attributed some of her success to this improved approach.

Every race that year was fun for me. The pressure was off ...I wouldn't dissect the race beforehand, like what if this or that scenario would happen. Just go in and go hard ... like be smart about it and be tactical but you can't be disappointed with doing your best.

She described specific feelings prior to a race that allowed her to enhance her performance. "... my coach would say; go celebrate your hard work. That's all I wanted to do ...I was focused and so ready to go but also relaxed. So I knew that was a very good headspace for me."

The culminating race of this athlete's season produced an excellent result in a world championship event. As she reflected on this race and the rest of her season she spoke of the importance of her mental approach on her improved results. "I went from finishing the year before last at worlds to finishing fourth that year. And I don't think I was a completely changed person but I think a lot of it was just the mental approach to things." She spoke of specific examples and mental cues she learned that helped her perform better in different components of the triathlon event. Discussing the swim portion of her triathlon:

My motto for that race was "take charge" or "make this happen" I remember like trying every cue possible like okay bury your head (in the swim portion) cause I used to like want to look up and see if I'm catching them.

Discussing her approach to the run portion:

I made it almost into a game maybe in that race. Lets see if I can catch someone, it was like a four lap run, so lets see if I can catch someone from the front group

within the first lap and then I'd catch someone before the end of the first lap and I'd be like wow this is good!

As this participant reflected on the season following her coaching change she recognized the importance of confirming new knowledge through competitive performances.

A race that would have been in the past for disaster I made it happen ... and that's when I really bought into the program and her philosophy. I had done it in training but to actually put it together in the race. And that's often the race I look back on. I mean I've been in situations since then when it doesn't play out like that and I finish 25th but I don't give up.

Learning through a race was described as a significant "turning point" as her coach made her believe "great things happen regardless of what happens during a race". These lessons her coach was teaching her and she was applying in training were reinforced through competitive races.

Interpretation for Participant #4

The interview with this participant began by discussing the incident of a coaching change and the impact it had on her career. The themes that emerged revolved around this incident as well as the season that followed her coaching change.

Learning from a Coaching Change. This athlete described her decision to change coaches following a disappointing season where she felt she was not making progress as a performer. It was interesting to hear from an experienced athlete how learning from a new coach brought about a completely different outlook and approach to her training than she was used to in the past. This theme highlights the importance and contribution a new

coaching approach can have on an athlete's development event after years of competing at a high level in their sport.

Learning a New Mental Approach. Under the guidance of her new coach this participant talked about the physical changes to her training program but more about the mental approach her coach instilled in her that allowed her to progress in the season that followed. She described several incidents in training and competition where she acknowledged how her mental approach allowed her to perform differently than she would have in the past. Rather than giving up or pulling out of a race she applied her coach's philosophy of "making it happen" which led to improved performances.

An important philosophy she applied was learning that not every part of a race has to go well in order to have a positive overall outcome. Similarly in training she discovered she could have a good training session even if she felt tired going into the workout. The new mental strategies and mental strength she developed helped lead to greater success in training and competition.

Learning through Performance. The athlete talked about many lessons she was learning from her new coach but emphasized the importance of confirming her new approach through a competitive event. She talked about her first significant race of the season following her coaching change. She described her overall result as positive but was more excited about how she applied her mental approach to perform better than she would have in the past. The race experience enabled her to solidify that what her new coach was teaching her was impacting her development as an athlete.

Learning a New Perspective . Following her change in coaches this athlete took on a fresh start and applied a new perspective heading into her next season. Her overall

goal was to enjoy herself and celebrate her opportunities as opposed to her previous season which she described as a pressure filled year where she would tear herself apart prior to races feeling so nervous that she often did not perform to her potential. She recalls specific successful races the season following her coaching change where she applied her new perspective by taking the pressure off herself and feeling relaxed and excited prior to competitions. This new approach continued during her races. She describes a particular successful race as being hard work but remaining in the moment and having fun as she competed with the best athletes in her sport.

Discussion

The purpose of this study was to explore how athletes learn and how learning from experience has impacted their development in becoming capable international sport performers. Following a phenomenological paradigm, participants, who are expert practitioners in their field, were able to articulate their lived experiences in sport about the phenomenon of learning. Phenomenology allowed the researcher to acknowledge and explore the individual nature of human experience, which is at the essence of experiential learning (Moon, 2004).

From the themes that emerged from the analysis of interviews with each participant, the following section presents the central themes that connect the individual accounts and discuss how they correspond to the literature on learning. The central themes are those that pervaded across most or all of the participants and were considered to be most important in the development of the elite athletes in this study.

Central Theme #1: Learning from a New Coaching Approach

All of the athletes expressed the importance of coaches and a central theme that impacted their progress revolved around learning from a new coaching approach. This theme was discussed in two ways. First, the need for an athlete to take personal ownership of their training program and not solely rely on a coach's structured program. This was primarily discussed by one of the experienced athletes who felt taking responsibility for his training allowed him to continue to develop at a later stage in his career. The concept of taking responsibility of one's own training, relates to the literature on situated learning. Lave and Wenger (1991) introduce the term legitimate peripheral practice where learners begin as participants in a community of practitioners. This idea relates to an apprenticeship where students eventually become teachers in a developmental cycle. Relating situated learning to an athlete taking on personal ownership of their coaching is that the athlete eventually obtains enough knowledge from coaches in order to become a coach themselves.

A second way that learning from a new coaching approach impacted the athletes in this study was how a direct coaching change resulted in a successful season to follow. An interesting observation was how even at a later stage in athletes' careers, participants' spoke of how much can be learned from a new coach. Learning from a new coach relates to the concept of mediated learning discussed by Moon (2004) in two different models of learning. Mediated learning is the central learning condition in the "Building a Brick Wall" model. In the "Network" model mediated learning is one form of learning in a complex learning process. This type of learning is directed from one person to another

such as a teacher-student or coach-athlete relationship. In this study the mediated learning experienced by an athlete's new coach proved valuable in their future success.

Central Theme #2: Learning from Performance

A second central theme that came through from the participants in this study was learning from performance connected to both training and competition. This theme was expressed in two ways. First, participants discussed learning from a successful performance and specifically talked about the importance of developing an appropriate perspective or mental approach. Orlick (2000) states that in order for athletes to achieve results closer to their potential they need to develop an ability to carry a positive perspective and observe situations in a constructive way. The athletes in this study focused their performance discussion on perspective in terms of how they approached an important competitive event. A common theme in approaching competitions was having emotions or feelings related to being relaxed, having fun, and looking forward to performance as opposed to feeling pressure and being tense and nervous. In their discussion on emotional preparation, Botterill and Patrick (2003) explained how emotional readiness could be a significant factor in individuals being able to perform at their optimal level. The top performers that participated in this study also stressed the importance of this concept of being emotionally ready in their successful performances.

A second way participants in this study learned from performance was through disappointments and setbacks. Disappointments were expressed in various ways from injuries, to single race "failures" to complete seasons of frustration. A disappointing situation resulted in various changes from a coaching change, to adjusting race strategy or relating to the discussion above, a shift in perspective or mental approach. Similar to the

athletes in this study, Orlick (2000) stated that even the greatest performers failed but they have acquired strategies to learn and benefit from these experiences.

Learning from performance relates to the concept of reflection-on-action. This idea is discussed in the learning literature by a number of different authors. Schön (1983) wrote extensively about the value of reflective practice in developing skill or ability in an individual's particular field. In experiential learning reflection is encouraged to assist in the improvement process (Moon, 2004).

Two learning models incorporate the reflection aspect. Hogg's (2002) six step debriefing model included reflecting on an event as a key element in the learning process while Moon's network model included reflection as one form of learning in a multifaceted process (Moon, 2004). In the present study the participants expressed the value of the reflection process on their action in a number of situations including their experience with coaches, performances, effort, motivation, and perspective.

Central Theme #3: Learning During Performance

A third central theme corresponds to how participants experienced learning during a performance. This theme relates to the concept of reflection-in-action. Schön (1983) recognized an individual's ability to think about what they are doing while they are doing it and states that some of the most interesting examples of this process occur during a performance. One reason why this study focused on an endurance sport was to explore if endurance athletes have the potential to reflect and learn in the midst of a performance.

Although the participants in this study did not articulate their learning as "reflection-in-action" or "learning during performance" the concept came through in the data in two ways. First, participants talked about learning during training. Athletes

learned they could compete with the better performers in their training group. They talked about making specific decisions in a training session to not be content with their situation but to challenge themselves to perform at a higher level.

Second, athletes discussed the concept of learning during a competitive event. Schön (1983) explained how reflection-in-action frequently occurs around an experience of surprise as opposed to expected results. One athlete talked about learning during a performance that she can perform with the best athletes in her sport as she surprised herself by being in contention in the latter stages of a race. Another athlete spoke of her thought process during the swim portion of a triathlon event in how she made a conscious decision to stay with the lead pack of swimmers rather than being content to remain with a slower group as she would have done in past situations. Another example was given from an athlete who discussed his “winning perspective” prior to a major race that he won. He talked about knowing in the moment that he was going to win and reminding himself during the race to trust his that his race strategy would result in a victory.

Apart from Schön (1983), Moon (2004) included the reflective aspect as a component of learning in the network model. Reflection can occur as part of an internal learning situation, which refers to a circumstance where there is no new material of learning coming from a mediated or unmediated source (Werthner & Trudel, 2006). An athlete may engage in the reflection-in-action process during a performance to learn (i.e. confidence, perspective) resulting in a change in their cognitive structure and helping them to develop as a more capable athlete for subsequent performances. As Kemp (2008) suggests, the successive learning “from” competitive experiences takes the form of a

series of experiential iterations that collectively, and progressively over time, come to influence the decision-making of an athlete in a future competitive situation.

Central Theme #4: Seeking out Learning

A final central theme that came from this study relates to how participants sought out learning opportunities on their own. There were a number of ways in which the athletes searched for new knowledge. First, through observation and modeling of more experienced athletes. This type of learning relates to Bandura's (1997) social learning theory that theorizes that individuals can learn from multiple sources. One way of learning is through examining the actions of others (Sedgwick & Crocker, 2007). The youngest participant in this study expressed the value of being exposed to successful more experienced athletes in learning in different ways including how they acted and behaved in training, at competitions and away from their sporting environment.

Second, participants talked about the importance of seeking out learning from other coaches. Direct learning from a new coach was discussed as a central theme on its own, however the three more experienced participants expressed the importance of seeking out a coach that could assist them in getting to the level they hoped to perform at. Participants described the decision to switch coaches as difficult and risky as it often moved them away from their comfort zone or physically away from their home country. Orlick (2000) stated that qualified, hard working, well-intended coaches may not be the best fit for the unique personalities and attributes of unique individuals. Athletes need to seek out a coach who can assist them in their development and who help them feel capable and confident about their ability to reach their goals.

A third way participants sought out learning involved searching for new knowledge through other resources. This form of learning was discussed by one of the more experienced athletes in how he found assistance in his outlook towards his sport by reading certain books, which influenced his approach. Each of the three ways of seeking out learning relate to the concept of unmediated learning. Moon (2004) included unmediated learning as one of the aspects of learning in the network model. The idea is explained as individuals searching for learning on their own. Unmediated learning situations are considered a valuable method of obtaining new knowledge as the material of learning is more beneficial or empowering because the individual is creating the learning opportunity themselves (Werthner & Trudel, 2006). The concept of creating one's own learning opportunities also relates to Moon's (2004) discussion on experiential learning. Moon emphasizes the importance of an individual being an active participant in his or her learning.

Revisiting the Researcher's Experience

As an athlete it was a privilege to talk to professional international athletes about their experiences. The stories participants shared revealed different aspects of their successes and struggles along their journeys to developing into athletes at the top of their sport. Corresponding to phenomenology, the theory used to guide this study, the methods section included a personal narrative of the researcher's experience with the research topic.

Reflecting on my personal narrative I can see a number of similarities in my learning and development as an athlete. I can relate my experiences to the central themes that emerged from the analysis of participants in this study. As a distance runner I have

benefited from working with a number of excellent coaches who have brought their unique personality, approach, and philosophy to working with my individual nature and needs as an athlete. At times I have been surprised at my athletic progress in working with a coach who incorporated even slight changes in coaching style or philosophy.

I have also learned from both successful and disappointing events and situations. I clearly remember a period near the beginning of my running pursuit when I needed to develop a more positive perspective as inappropriate emotions were affecting my performance. There have been a number of instances when I have reflected on training or competitive performances with a coach or sport psychologist to determine what type of action or behaviour could lead to improvement.

Considering the concept of learning during a performance, I realize how meaningful learning-in-action can be. Whether it be changing my mindset or consciously challenging myself in the midst of a performance, reflection-in-action is a form learning I have experienced. I have also benefited from seeking out learning opportunities from more successful athletes, coaches, or other resources that have proved valuable in my development.

Reflecting on my conversations with each participant, as an athlete I am inspired and challenged. Inspiration comes from hearing about the journey, commitment, and belief it takes some athletes to reach an elite level in their sport. Challenge comes from athletes who take risks in or outside of competition to discover what they can accomplish to reach their potential. Other challenges comes from the knowledge that these elite athletes realized the importance in developing an appropriate perspective and from those

who continued to seek out learning, often on their own accord to search for even slight improvements in their athletic pursuits.

Summary

Phenomenology provided a framework for examining the experiences of athletes related to their learning and development. Rather than researching a particular aspect of learning or a particular learning model, this qualitative approach revealed a more complete representation of aspects involved in the process of athlete learning eliciting information that may have otherwise been unattainable. The phenomenological interview method allowed a way to explore an experiential narrative and gather rich data of the human phenomenon of athlete learning (van Manen, 1990) from expert practitioners in their sport.

From a starting point of talking with participants about a specific incident or event that had an impact on their approach to their sport, an analysis revealed general themes for each individual account. The unique experiences of each individual resulted in four central themes that prevailed across the participants. First, learning from a new coaching approach was discussed in leading to improvements in different aspects from physical, technical, and mental performance. Second, learning from performance was expressed in terms of relating a positive perspective to successful performances, as well as taking positive lessons from disappointing situations. Third, learning during performance related to the concept of reflection-in-action as athletes made decisions in the midst of performance. Fourth, seeking out learning was talked about in various aspects according to how the participants on their own sought out learning opportunities from different resources. Although these themes were discussed separately they are connected in terms

of how they demonstrated how learning from experience has impacted the participants' development as elite international athletes.

A number of theories and models of learning were examined to put into context how athlete learning could occur. Rather than test a particular learning model, this study allowed participant's unique experiences to explore the learning process an athlete goes through. The data revealed that some of the currently accepted learning models were limiting and not fully representative of the unique ways individuals experience learning and that a single systematic model could not fully describe unique athlete accounts.

It was valuable to identify what models or blend of models best reflected the lived experiences of athletes. Table 1 illustrates how each learning model or theory fits with the central themes. The Network model of learning (Moon, 2004) proved to be the most useful in providing a framework for explaining different aspects of learning revealed by the athletes in this study. This model's conceptualization of learning as occurring in a number of different ways, often interconnected, and taking place at the same time, creating a complex learning process was supported by the athlete's experiences. There was also that experiential learning made a valuable contribution to the learning process and development of athletes and that athletes were active in their own learning processes.

Table 1

<i>Fitting the Central Themes to the Theories and Models of Learning</i>					
Central themes	Brick wall	Debriefing	Situated	Experiential	Network
Learning from a new coaching approach	√		√		√
Learning from performance		√		√	√
Learning during performance				√	√
Seeking out learning				√	√

Conclusion

For this study the essential meanings of learning and development were captured through interviewing athletes about critical incidents (performances or other situations) that impacted their subsequent approach to their sport. A thematic analysis of interview transcripts revealed the subjective nature of athlete experiences and also the central themes that connected their unique experiences. The nature of athlete learning and development used by the elite athletes in this study has implications for athletes and coaches and offers a foundation for intervention and future research.

From the researcher's viewpoint as an athlete, there has been personal benefit to learning from athletes who are expert practitioners in their field. In general, athletes can recognize that learning takes place in various ways. They can be encouraged to explore learning opportunities outside of formal coaching that may benefit their development.

Athletes at various levels of skill and experience level can be encouraged to be reflective on their experiences for the intent of improvement. Athletes can also be inspired to take an active role in their learning by discovering new learning opportunities either from a coach, other experts in their sport, and by seeking out learning from different resources. In competitive sport where even slight improvements can be critical to an athlete's performance, athlete's can be encouraged by the various learning avenues revealed by the athletes in this study.

Coaches, sports psychologists, and other individuals in an athletes learning community can also benefit from the experience of athletes in this study. Brown (2008), states that good teachers must resist imposing their own goals on the learning experience of the learner. Given the unique personalities, strengths, and weaknesses of an athlete, coaches can recognize that a systematic approach or model may not be best suited for the subjective nature of athletes. Coaches can attach importance to the reflection (reflection-on and reflection-in action) process in the development of athletes. A challenge for coaches, realizing that athlete learning is a complex process, is to create an environment where athletes can explore learning in a variety of ways. Sport psychologists may also use the information gathered in this study to work more effectively with athletes and coaches.

Future research can explore the concept and importance of athletes as active learners. An approach for this would be to develop a longitudinal study following athletes over an extended period of time. Results of this study can impact and challenge traditional learning theories and models. Research on athlete learning can further explore the potential of Moon's (2004) network model of learning which proved to be the most

useful model in providing a framework for explaining different aspects of learning revealed from the athletes in this study. Future research should also build upon the value of this phenomenological research and strengthen the empirical basis of the results by increasing the breadth of the sample (number, level, and types of athletes studied).

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Appendix A

Recruitment Script – Letter to Athlete

Dear _____ (athlete's name)

My name is David Jackson. I am a graduate student at the University of Victoria in the department of Exercise Science, Physical and Health Education. I am conducting a research study entitled Evaluating an Endurance Performance: Exploring How Athletes Learn.

I am contacting you to ask whether you would consider being a participant in my study. Prospective participants are elite endurance athletes. The role of the participant will be to participate in two interviews. The initial interview will range in length from approximately 30-60 minutes where you will be asked to discuss your learning experience in a significant athletic competition. A follow-up interview will be conducted to allow for participants to verify the conclusions of the research report.

If you are interested in participating or have any questions please contact me at the information below. You can also contact my graduate supervisor at the University of Victoria Patti-Jean Naylor (250 721 7844).

Thanks in for your consideration to be involved in this study,

Best wishes,

David Jackson, MA Candidate
University of Victoria
Telephone: 250 813 2994
Email: djackson@uvic.ca

Appendix B

Letter of Information

Dear Participant,

Through my involvement in sport I have become interested in the process endurance athletes go through to learn about their performances. In this study I am interested in documenting examples of “lived experiences” relating to how athletes make sense and learn from their competitive experiences.

It is hoped that this study will lead to potential benefits for athletes, coaches, sports psychologists and others involved in the athletes learning community. Implications may be relevant to challenge traditional learning theories and performance evaluation practices.

I have decided that spending time interviewing athletes will contribute greatly to the research for this study. I hope to explore the meanings of an athlete’s competitive experience and how this informs their identity and subsequent performances in training and competition.

Each participant will be interviewed twice. Interviews will be conducted in person at a location convenient to the participant. The initial interview will range in length from approximately 30-60 minutes where you will be asked to discuss your learning experience in a significant athletic competition. A follow-up interview will be conducted to allow for participants to verify the conclusions of the research report. Interviews will be recorded on an audiotape. Identities of participants will be kept confidential.

Thanks in advance for your consideration to be involved in this study,

Best wishes,

David Jackson, MA Candidate
University of Victoria
Telephone: 250 813 2994
Email: djackson@uvic.ca

Appendix C

Draft Interview Guide

Time of Interview: _____
Date: _____
Location: _____
Interviewer: _____
Interviewee: _____

Note for Interviewer:

Begin with some casual conversation and briefly describe the study.

Focus for Interview #1

Having the participant share their lived experience of a specific critical incident and explain the context around this incident.

Questions:

1. Can you tell me about a specific incident that occurred before, during, or after an important competitive event that had an impact on how you approached your sport?
2. Tell me more about the context that surrounded this incident?
3. Tell me more about ... (what followed the incident)
4. Can you tell me more about when and how you learned from this event?
 - e.g – paraphrase a response ... “So you are saying that ...”

Reminder for Interviewer:

Mention some of the key points that were discussed and ask the participant if there is anything more they would like to add before the interview has concluded.

Note for Interviewer:

Thank the individual for participating in this interview. Assure him or her of confidentiality of responses.

Appendix D

Participant Consent Form

You are invited to participate in a study entitled “Evaluating an Endurance Performance: Exploring How Athletes Learn” that is being conducted by David Jackson.

David Jackson is a Graduate Student in the department of Exercise Science, Physical and Health Education at the University of Victoria and you may contact him if you have further questions by email (djackson@uvic.ca) or phone (250 813 2994).

As a graduate student, I am required to conduct research as part of the requirements for a Masters degree in Kinesiology. It is being conducted under the supervision of Patti-Jean Naylor. You may contact my supervisor by email (pjnaylor@uvic.ca) or phone (250 721 7844). My co-supervisor is Tom Patrick who works at the Canadian Sport Centre in Ontario and can be contacted by email (tpatrick@cscontario.ca).

Purpose and Objectives:

- To explore the meanings of an athlete’s competitive experience and how this informs their identity and subsequent performances in training and competition.
- To explore the process an athlete goes through to learn about their performance.

Importance of this Research

- It will be possible to discuss the potential benefits for athletes, coaches, sports psychologists and others involved in the athletes learning community. Implications may be relevant to challenge traditional learning theories and performance evaluation practices.

Participants Selection

You are being asked to participate in this study because:

- You are an elite endurance athlete
- Elite athletes are being selected because they are able to provide experiences from a variety of critical competitions and provide rich, descriptive data.
- You have been selected because you are a member of the athletic community in Victoria.

What is involved

If you agree to voluntarily participate in this research, your participation will include:

- A one-on-one interview with the researcher that will last between 60 and 90 minutes. During this interview you will be asked to discuss your learning experiences in athletic competition.
- A 30 minute follow-up meeting with the researcher to verify the conclusions of the research report.
- The interviews will take place in a classroom at the University of Victoria, at your workplace, or at another location that is suitable to you.

Inconvenience

Participation in this study may cause some inconvenience to you, including:

- Taking time away from your regular daily activities (work, training, family commitments).

Risks

- There are no known or anticipated risks to you by participating in this research.

Benefits

The potential benefits of your participation in this research include:

- Understanding more about how you learn from and make sense of your athletic performances.
- Understanding how and when learning occurs for athletes.
- Greater knowledge for coaches and sports psychologists that challenge traditional learning theories and performance evaluation practices.

Compensation

- If interviews are conducted at the University of Victoria (or another location where parking payment is required) a parking pass will be provided for participants.

Voluntary Participation

- Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data will be used only if you give permission.

Researcher's Relationship with Participants

- The researcher may have a relationship to potential participants as acquaintances through association in the Victoria athletic community.

On-going Consent

- The research will require meeting with participants over two separate interviews. Signed consent will be obtained at the beginning of the data collection process as participant requirements will be explained on the letter of consent. The participant and the researcher both keep a copy of the signed letter of consent.

Anonymity

- In the data gathering phase of the research (interviews) the anonymity of the participant cannot be protected as the interviews are done in person.
- In the research report the anonymity of the participant will be protected by substituting a pseudonym for the participant's name.

Confidentiality

Your confidentiality and the confidentiality of the data will be protected by:

- If participant names need to be used in the data analysis, pseudonyms will be used to ensure confidentiality.
- A participant may be identified in the research report apart from the use of pseudonyms to protect identification by name. For example if the participants are elite level endurance athletes from the Victoria area, when discussing a particular participant the specific sport they are involved in will not be mentioned but rather they will be referred to on a more global level (i.e. elite endurance athlete, world class competitor, national level athlete).

Dissemination of Results

It is anticipated that the results of this study will be shared with others in the following ways:

- Given directly to participants
- Thesis Presentation
- Presentations at scholarly meetings
- Possibly in a published article

Disposal of Data

Data from this study will be disposed of:

- Within 5 years of the conclusion of the study
- Paper copies of data will be shredded
- Electronic data will be erased
- Until disposed of, data will be stored in a password protected computer file and in a locked filing cabinet in the school of Exercise Science, Physical and Health Education at the University of Victoria.

Contacts

Individuals that may be contacted regarding this study include:

- Researcher (refer to contact information at beginning of this consent form)
- Supervisors (refer to contact information at beginning of this consent form)

In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

Your signature below indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

Name of Participant

Signature

Date

A copy of this consent will be left with you, and a copy will be taken by the researcher.