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Examining the Progression of Motor Skills in Coaches and Athletes Through out the Lifespan

[1]Stephen A. Fadare., [2]Jonah Marie B. Mamolo, [3]Gil Joey M. Ebardo., [4]Sittie Hasminah Mautein Limbotongan, [4]Anna Mae MohametanoEbardo

[1]Assistant Professor, CSPEAR, Mindanao State University (Main) Marawi, Philippine – https://orcid.org 0000-0002-3444-4713*

[2] Faculty, Liceo de Cagayan University, Philippines, https://orcid.org/ 0009-0003-5028-9340

[3] MSPE Student, CSPEAR, Mindanao State University (Main) Marawi, Philippine, https://orcid.org 0009-0004-1861-1691

[4]Faculty Mindanao State University - University Training Center, Marawi, Philippines, https://orcid.org/0009-0002-3315-1115

[4]Faculty Mindanao State University - University Training Center, Marawi, Philippines https://orcid.org/0009-0006-9986-8740

Abstract- To perform activities requiring motor skills, the joints and body parts must be moved voluntarily in order to achieve the intended outcome. To assist their players in performing to the best of their ability, coaches now work to develop their players' capabilities. This essay aims to shed light on the subjects discussed in the review papers, such as the progression of motor skill development over the lifespan, the significance of motor skill development in athletes, the role of coaches in developing athletes' motor skills, the effects of developing athletes' motor skills on athletic performance, and the connection between developing athletes' motor skills and injury prevention. For the purpose of this research, a number of recently published articles from various journals were carefully examined and adopted from 2015–2023. The articles that were taken into consideration were the ones that suited the study. Coaches and athletes alike must work on developing their motor skills since it enhances stability, performance, injury prevention, and overall health. Coaches should be aware of this growth so they can establish goals for their athletes more efficiently. Researchers advise beginning athletes to master basic motor skills before participating in sports, that coaches be prepared to mentor players, that more research be done on the earliest developmental phases, and that the role of skill development in athlete injury prevention be broadened.

Keywords*: Athletes, Coaches, Lifespan, Motor Skills, Progression*

Introduction

To assist their players, perform to the best of their ability, coaches now work to develop their players' capabilities. Coaches must first examine the foundations of those motions before enabling our players to perform far more complex moves. Each player must first master the grab and swing techniques before learning how to bat. The growth and development of motor abilities from basic to much more complex motor tasks are

what we are trying to understand. A child's acquisition of movement patterns and motor abilities is referred to as motor progression or development (Beach et al., 2023).

To perform activities requiring motor skills, the joints and body parts must be moved voluntarily in order to achieve the intended outcome. Walking, reaching for your coffee, leaping, jogging, biking, and weightlifting are a few of the most typical instances (Signh, 2018). Teaching Progressions for Motor Skill Attainment (2018) asserts that students' motor skills may be learnt and improved through incremental tasks that suitably evaluate their abilities.

Furthermore, according to Nan Zeng et al. (2017), in order to master a task, motor skills are learnt through a sequence of actions that are combined to create a fluid, efficient action. Additionally, according to Matheis & Estabillo (2018), there are two primary kinds of motor abilities: large motor skills and fine motor skills.

Our entire body and major muscle groups are utilized in gross motor activities. For motions like sprinting, jumping, and throwing, a person has to be able to coordinate their arms, legs, and other big body components (Matheis & Estabillo, 2018). Conversely, fine motor abilities make use of our tiny muscles to carry out actions. For motions like picking up and grabbing tiny things, it involves coordination of smaller movements between the fingers, hands, and feet (Matheis & Estabillo, 2018).

Our daily lives need the utilization of our motor abilities, which have evolved into biological necessities. They support our mobility and all of our activities, from straightforward actions like reaching for an object to more difficult ones like swimming. It is crucial for us to comprehend the importance of improving our motor skills over the course of our lives as coaches and players in order to prepare for the development of our sport-specific skill set.

The Progression of Motor Skill Development Throughout the Lifespan

Research on how people's motor abilities vary and develop throughout time is supported by the lifespan perspective. The changes in our movement patterns that occur throughout the course of our lives are referred to as motor development in humans (Payne & Isaac, 2017). Fundamental movement skills have been and will continue to be a focus of research, according to Barnett et al. (2016). Also proven to be a predictor of greater levels of children's health-related physical fitness, physical activity habits, and health outcomes is the development of motor skills (Gao et al., 2021).

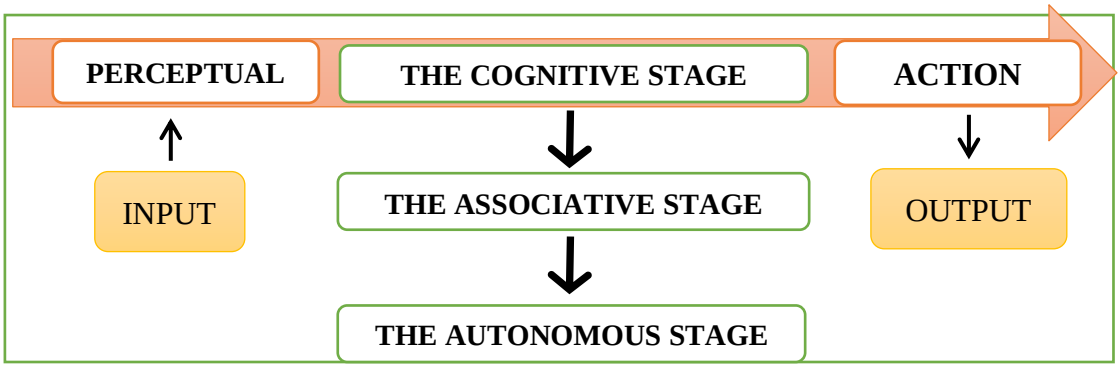
In the context of the development and learning of motor skills, the phrase "golden age of motor skill development and learning" or ideas of a similar nature are frequently used in sporting contexts (e.g., USA Hockey, American Development Model; Mancini, 2015; Squillante, 2018; Solum et al., 2020). Furthermore, it is commonly said that the basis for future success is laid during this so-called golden age, and on occasion, it is argued that it will be difficult to master specific talents once the golden era has passed (Solum et al., 2020). According to Solum et al. (2020), there is less consensus on the precise age that constitutes the "golden age." Most estimates appear to lie between 6 and 12 years, with the majority of specialists agreeing that the conclusion of the period is when puberty begins. To maximize motor development in young children, children's fine and gross motor abilities must be improved (Sutapa et al., 2021).

Lautieri (2019) asserts that teenagers' ability to move their bodies with greater dexterity and accuracy improves as they get older. Compared to boys, adolescent girls don't make as much progress in their gross and fine motor abilities until they are around 14 years old. After this, individuals frequently don't continue to develop their motor abilities unless they are deliberately preparing for a sport or activity that requires these talents. Adult motor skill development will likely begin to steadily deteriorate with little to no exercise. As it is advised to begin exercising to support the body's physical fitness and lead a healthy lifestyle.

Importance of Motor Skill Development in Athletes

A growing area of study in sports science is the learning and improvement of athletes' motor skills. Athletes must understand that improving their motor abilities as they advance from easy activities to more difficult ones

is a crucial part of their athletic development. Kiika (2023) defines motor skill development as a change in performance brought on by consistent practice. This advantageous impact frequently manifests as greater efficiency and accuracy in both straightforward and challenging physical tasks. Motor learning is a reasonably persistent talent since individuals must continually respond to and adjust to the obstacles in their environment(Glenda et al.,2022).



Fitts and Posner's motor learning theories, known as the three phases, consider practice time and attentional challenges. Shaw (2022) focuses on the cognitive, associative, and autonomous phases of learning, examining the growth of a performer from novice to expert.

The way athletes move and carry out the task demonstrates how their motor skills improve as they perfect their capabilities. One of the finest instances is a youngster trying to serve a volleyball with an overhand serve. As time goes on, the youngster develops the motion and can serve the ball strongly. In order to assess their relevance for the development of an athlete's skill set, let's analyze these three theories of learning in further depth using this example.

The Cognitive Stage

The cognitive stage is the initial level of motor skill learning, according to Barinua et al. (2022). The student will concentrate on the tasks at hand in this situation.

Questions like "what to do" are vital at this point. For instance, when practicing an overhand serve in volleyball, a player may frequently ask about the length, speed, and power needed to perform the serve perfectly. The athlete will then ponder these issues in order to have a conversation with themselves.

The athlete will pay attention to what his coach needs to say in order to achieve his goal. The learner makes an effort to master a skill during the cognitive stage by gathering verbal or visual information. He will pay great attention to his instructions, which contain information regarding the errors he has been making and his inconsistent performance, because the feedback is significant (Barinua et al., 2022).

In addition, Fitts and Posner's (1967, as cited in Kee, 2019) stages of learning model states that the strategy to be used when learning new motor skills is to limit the complexity and number of instructions to be assimilated because beginners may find it difficult to remember or comprehend instructions, especially if the information load is overwhelming. We athletes will participate in problem-solving in an effort to improve upon our uneven skill performance during this phase. We will then be able to analyze our coach's criticism and decide what needs to be changed.

In order to cognitively comprehend the dimensions, demands, and requirements of the necessary skill movement, a person must first go through the cognitive stage, which is why it is so important (Barinua et al., 2022).

Another illustration would be if you were a beginner volleyball player and your coach let you watch an all-star game. Your instructor then went into the intricacies of the actions with you. You are getting both verbal and visual information about the game in this way, which will make it easier for you to relate to it and play it appropriately.

Lastly, Shaw (2022) points out that, fortunately, increase in performance are quite quick at this stage, and performance gains can be made with less practice than at later stages of learning.

The Associative Stage

The associative stage, sometimes referred to as the motor stage, is the next stage of the development of motor learning. In this stage, learners continue to pay attention, but they pay less attention to verbal signals for information and more attention to the skill itself. Learners now attempt to think about how to do the necessary skill instead of simply thinking about what to do. Lots of practice is essential for mastering this phase, and athletes are already beginning to advance.

According to Jackson (2016), an athlete has attained the associative stage of skill acquisition when they have transitioned from thinking about what they are doing to thinking about how they do the skill. In other words, they are no longer considering their body position when passing the ball or hitting the ball, but rather where they are passing it or hitting it. Additionally, adolescents begin to consider the results rather than merely their ability to kick or smash the ball.

Additionally, according to Coary (2021), the athlete is honing their gift while also comprehending the principles behind it. They are less likely to make errors, and some of them are simpler for them to correct. Athletes start to differentiate between content that is important and irrelevant as performance consistency rises. Associative learners have a full understanding of how to complete the job despite their flawed performance. The student must keep practicing the skill in order to start improving it. Errors are less common now that the procedure has progressed this far.

Athletes still benefit from a coach's fast feedback on their technique and understanding of the results throughout this stage even if they can change their method and start to complicate the environment in which they practice the skill (Jackson, 2016). For instance, players now concentrate on how to execute the toss and smash the ball overhand rather than just how to complete the overhand service.

The associative stage is the stage of purposeful practice and feedback, according to Nassar et al. (2021), with more fluid movements and less interruptions. Less cognitive fatigue and greater working memory are now accessible to the learner. Furthermore, according to Shaw (2022), some performers might never go above this level if they do not substantially engage in skill development.

The Autonomous Stage

The automatic stage, often referred to as the autonomous stage, is the third and final step in the acquisition of motor skills. At this point, the athlete has acquired sufficient knowledge and practicing is second nature. Self-training has grown in importance throughout this phase as athletes can now recognize and correct their mistakes on their own.

The skill is allegedly incorporated into motor memory (the mind-body link) at this level, according to Coary (2021). This is the third and last stage of learning, and if you've reached it, you're regarded as an authority on the subject. Each time, the talent is performed almost accurately and without much thought. Few errors are made by learners, and they can correctly utilize both internal and external feedback. A person who has attained the autonomous stage may also perform a skill well while focusing on numerous things at once, according to Improving PDHPE (2017).

Barinua et al. (2022) assert that it is true that few players make it to the third level. It depends on a player's ability to reach the autonomous level whether or not the rules, practice layout, and task factors are all taken into account. Both the best-case and worst-case outcomes are possible for an autonomous stage. The benefit of this phase is that it requires less cognitive strain, less effort, and less concentration, allowing the player to focus on another activity while also finishing the one they are now working on.

The autonomous stage has the drawback that poor mobility is encouraged by automated performance. The players overlook an essential distinction: just because they are skilled at something and it has become second

nature to them does not mean that the conduct is right. Players have the capacity to consistently act incorrectly on autopilot (Barinua et al., 2022).

Additionally, a learner will always return to the cognitive stage and the associative stage of motor learning and control since these are important phases in the relearning process (Barinua et al., 2022). All of the world's specialists stress the significance of occasionally revisiting the first and second phases of motor acquisition, regardless of how proficient or successful you become.

This is essential, particularly for seasoned athletes who are struggling or whose performance is slipping. To rectify the fundamentals and break from their previous patterns, it is crucial for them to go back to the basic cognitive and associative phases. Athletes might rediscover new methods for acquiring certain skills by listening for verbal signals from the instructor and acting accordingly.

The Role of Coaches in Developing Motor Skills in Athletes

Sports coaching involves more than simply coaching; you also need to develop your players to the best of their potential. According to Maslen (2015), coaches in particular have a big influence on a young athlete's life. If they have positive sports role models when they are young, players are more likely to search for successful role models throughout their life.

Sports coaches who are knowledgeable in more than just the Xs and Os are necessary for success at every level of competition. The coaching industry is ever-evolving. Because they are responsible for assisting athletes in growing and achieving their objectives, coaches should become knowledgeable in all areas linked to performance enhancement (Academy, 2018; Taktek et al., 2019)

It's important to be aware that the proverb "practice makes perfect" is no longer widely used in regard to sports, according to Sunaryadi (2016). In a variety of circumstances related to sports, the adage "practice doesn't make perfect; perfect practice makes perfect" is the one that is most commonly cited. This phrase highlights how well-planned practice, which eventually results in enhanced motor skill performance, facilitates learning new motor abilities. According to Barker et al. (2021), coaching scholars have examined a range of elements associated to the growth of sport-related skills. In this section, we divide coaching methods for skill development into four major groups and talk about the underlying epistemological presumptions.

Explicit teaching is the first category of training. When a coach trains an athlete utilizing verbal explanations, visual examples, and instant coaching signals, the athlete is said to be learning explicitly since the information is coming to them directly from the outside (Height, 2020). Implicit coaching, according to Elderton (2021), falls within the second group of skill-development techniques. Implicit feedback is more complex and challenging. When a player picks up knowledge (or a skill) in an indirect, usually unconscious way, it happens. Issues can be resolved in indirect ways. Each participant finds their own answers. Athletes may approach optimal performance (and reach the target) with the right information, and excellent coaching expertise is mostly concerned with understanding how to impart such information. This is similar to direct instruction. To convey this knowledge indirectly, however, coaches using implicit coaching approaches must have a variety of tactics in place (Barker et al., 2021).

The third method of supporting skill development focuses on practice. Researchers have looked at practice and subsequent learning in a variety of methods. Some individuals define learning as memory retention and focus on factors like knowledge of objectives and knowledge of performance in a laboratory environment where performance circumstances are controlled. Others have employed a more organic method, tracking the development of skilled performers through time. Various epistemic presuppositions are employed to assist coaching practice depending on the strategy (Barker et al., 2021).

Additionally, Barker et al. (2021) underlined that it is believed that learning to absorb sensory information entails repeating the task after repetition in both techniques.

The Impact of Motor Skill Development on Athletic Performance

Athletes constantly aspire to their ultimate professional objective, which is to perform at their very best on the field of play. As was said, one method we build and refine our talents and abilities is through the development of our motor skills. The degree to which motor activities are done is referred to as performance. There is rising evidence that certain skills and characteristics (factors) can be used to distinguish between highly skilled and less skilled performance in young individuals. Physical and physiological, perceptual-cognitive, and psychological aspects are only a few of the many characteristics that these variables have (Jukic et al., 2019).

According to Lola and Tzetzis (2021), young athletes occasionally try to improve their performance in a particular motion or movement. All of these situations—collectively referred to as learning experiences—are acquired via deliberate, systematic effort.

Several researchers have investigated the effects of various education programs by distinguishing the degree of motor skill performance, according to Baker et al. (2005, as quoted in Lola &Tzetzis, 2021). This study reveals the critical impact that direction and purposeful practice—the kind and quantity of stimuli that individual gets to develop athletic expertise—play in enhancing sports performance.

Sports performance necessitates the development of strategies for selective attention, continuous interaction with memory, the ability to convert the decision into a motor response, and finally, the capacity to modify the initial decision in time, if necessary, in a competitive environment full of information (Cowan, 2016).

Learning needs to move from being novice (through visual and verbal cues) to advanced and elite (where they can now apply what they have learned from their coaches, find errors in their own movement, and master each skill needed for optimum performance) in order for learners to increase their athletic performance.

The Relationship between Motor Skill Development and Injury Prevention

From the viewpoint of the general public, there is occasionally claimed a direct causative link between rising levels of physical activity and increases in sports injuries. In order to perform at their best, athletes who are learning sports skills from instructors must grasp precise technical actions. These movements, together with the stress exerted on an athlete's muscles when they accelerate, decelerate, or change directions, increase the likelihood of injuries. Injuries can become significantly more likely to happen when combined with internal pressures like those produced by these performance demands and external factors like body contact (Academy, 2018).

According to Johnson et al. (2023), young athletes today train like elite professional athletes. A large number of kids conduct intense daily physical and psychological conditioning regimens in order to compete at their highest level in sports. Additionally, some athletes (15 years of age and under) are beginning to focus on one sport while simultaneously playing for many teams. Others (15) play several sports nonstop all year long without allowing their bodies and minds a chance to recover from the strain of athletic competition.

This is why physical injuries are common in athletes. With well-developed athletic motor skill abilities, sports performance may be improved and injury risk can be reduced. Maintaining powerful lower body muscles can reduce injury risk, and enhancing sports motor skill competency should be prioritized (Radnor et al., 2020).

Conclusion

Throughout their lives, coaches and athletes must continue to advance their motor abilities since doing so will improve their motor stability, sport-specific skill development, athletic performance, reduce their risk of injury, and improve their general well-being. Coaches will be better able to identify the precise goals they need to improve in order to enable players to attain their full potential by having a better understanding of the development of motor skills.

Recommendations

Given that motor skill development is a new area of study, the following suggestions are made based on the researchers previously mentioned: Before entering the world of athletics, novice athletes must be aware of the

basic motor abilities required. To assist athletes in their athletic pursuit, coaches must be prepared to satisfy their individual demands. Since most motor skill development studies concentrate on early childhood stages, more research needs to be done, particularly on the development of motor skills in teenagers and adults. Additionally, studies on the value of athletic skill development in preventing injuries should be expanded.

Declaration of Conflict

The authors declared no conflict of interest.

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Conflict of interest

No conflict of interest.

References

[1] Academy U. S. (2018). *A Coach's Responsibility: Learning How to Prepare Athletes for Peak Performance*. The Sport Journal. https://thesportjournal.org/article/a-coachs-responsibility-learning-how-to-prepare-athletes-for-peak-performance/

[2] Barker, D., Nyberg, G., & Larsson, H. (2021). Coaching for skill development in sport: a kinesio-cultural approach. *Sports Coaching Review*, 11(1), 23–40. https://doi.org/10.1080/21640629.2021.1952811

[3] Barnett, L. M., Stodden, D. F., Cohen, K. W., Smith, J., Lubans, D. R., Lenoir, M., Iivonen, S., Miller, A. H., Laukkanen, A., Dudley, D., Lander, N., Brown, H., & Morgan, P. B. (2016). Fundamental Movement Skills: An Important Focus. *Journal of Teaching in Physical Education*, 35(3), 219–225. https://doi.org/10.1123/jtpe.2014-0209

[4] Haibach-Beach, P. S., Perreault, M., Brian, A., & Collier, D. H. (2023). *Motor learning and development*. Human kinetics.

[5] Coary, P. (2021). The 3 Stages of Motor Learning. Paddy Coary Pilates. https://paddycoarypilates.com/the-3-stages-of-motor-learning/

[6] Cowan, N. (2016). Working memory capacity: Classic edition. Psychology press.

[7] Elderton, W. (2021). COACHING FEEDBACK SERIES: Part 7-Implicit vs. Explicit Feedback. AceCoach. https://acecoach.com/coaching-feedback-series-part-7-implicit-vs-explicit-feedback/

[8] Gao, Z., Wen, X., Fu, Y., Lee, J. P., & Zeng, N. (2021). Motor Skill Competence Matters in Promoting Physical Activity and Health. BioMed Research International, 2021, 1–5. https://doi.org/10.1155/2021/9786368

[9] Height, Z. (2020). Implicit vs Explicit Learning. *Height Performance*. https://heightperformance.com/implicit-vs-explicit-learning/

[10] Jackson, D. (2016). *Associative* - HSC PDHPE. HSC PDHPE. https://pdhpe.net/factors-affecting-performance/how-does-the-acquisition-of-skill-affect-performance/stages-of-skill-acquisition/associative/#:~:text=The%20associative%20stage%20of%20skill,ball%2C%20or%20hitting%20the%20ball.

[11] Johnson, S. R., Wojnar, P. J., Price, W. J., Foley, T. J., Moon, J. R., Esposito, E. N., & Cromartie, F. J. (2023). A Coach's Responsibility: Learning How to Prepare Athletes for Peak Performance. *The Sport Journal*. https://thesportjournal.org/article/a-coachs-responsibility-learning-how-to-prepare-athletes-for-peak-performance/

[12] Jukic, I., Prnjak, K., Zoellner, A., Tufano, J. J., Sekulic, D., &Šalaj, S. (2019). The Importance of Fundamental Motor Skills in Identifying Differences in Performance Levels of U10 Soccer Players. *Sports*, 7(7), 178. https://doi.org/10.3390/sports7070178

[13] Kee, Y. H. (2019). Reflections on athletes' mindfulness skills development: Fitts and Posner's (1967) three stages of learning. *Journal of Sport Psychology in Action*, 10(4), 214–219. https://doi.org/10.1080/21520704.2018.1549640

[14] Lautieri, A. (2019). Adolescent Physical Development: Part II. *MentalHelp.net*. https://www.mentalhelp.net/adolescent-development/physical/ii/

[15] Lola, A., &Tzetzis, G. (2021). The Development of Motor and Perceptual Skills in Young Athletes. In IntechOpen eBooks. https://doi.org/10.5772/intechopen.99245

[16] Malinis, B.G., Adlawan A. H., Fadare A. S.,&Gumanoy, A. D. (2022). Postural Assessment of Locomotor Skillsamong Elementary Pupils of MSU-ILS. International Journal of Science and Management Studies. 5(1), 82-87. https://doi.org/10.51386/25815946/ijsms-v5i1p109

[17] Mancini, B. (2015). 10U Q-and-A: What is the 'Golden Age of Skill Development'and why does it matter. USA Hockey, American Development Model.https://www.admkids.com/news_article/show/471299-10u-q-and-a-what-is-the-golden-age-of-skill-development-and-why-does-it-matter

[18] Matheis, M., & Estabillo, J. A. (2018). Assessment of fine and gross motor skills in children. Handbook of childhood psychopathology and developmental disabilities assessment, 467-484.

[19] Maslen, P. (2015). The Social and Academic Benefits of Team Sports. *Edutopia*. https://www.edutopia.org/discussion/social-and-academic-benefits-team-sports

[20] Nan Zeng, M.A., Haichun, S., Xu, W., Ping, X., & Zan, G. (2017). "Effects of Physical Activity on Motor Skills and Cognitive Development in Early Childhood: A Systematic Review", *BioMed Research International*,20 (13)https://doi.org/10.1155/2017/2760716

[21] Nassar, A. K., Al-Manaseer, F., Knowlton, L. M., & Tuma, F. (2021). Virtual reality (VR) as a simulation modality for technical skills acquisition. *Annals of Medicine and Surgery*, 71, 102945. https://doi.org/10.1016/j.amsu.2021.102945

[22] Payne, V. G., & Isaacs, L. D. (2017). *Human motor development: A lifespan approach.* Routledge.

[23] Radnor, J. M., Moeskops, S., Morris, S., Mathews, T. P., Kumar, N., Pullen, B. J., Meyers, R. J., Pedley, J. S., Gould, Z. I., Oliver, J. L., & Lloyd, R. S. (2020). Developing athletic motor skill competencies in youth. Strength and Conditioning Journal, 42(6), 54–70. https://doi.org/10.1519/ssc.0000000000000602

[24] Shaw, W. (2022). Fitts & Posner's Stages of Learning – Cognitive, Associative & Autonomous – Sport Science. *Sport Science Insider*. https://sportscienceinsider.com/stages-of-learning/

[25] Solum, M., Lorås, H., & Pedersen, A. V. (2020). A golden age for motor skill learning? Learning of an unfamiliar motor task in 10-year-olds, young adults, and adults, when starting from similar baselines. *Frontiers in psychology*, 11, 538.

[26] Squillante, A. (2018). Olympic Weightlifting for Throwers. TRACK, 7176.

[27] Sunaryadi, S. (2016). The Role of Augmented Feedback on Motor Skill Learning. 6th International Conference on Educational, Management, Administration and Leadership (ICEMAL2016).

[28] Sutapa, P., Pratama, K. W., Rosly, M. M., Ali, S. K. S., &Karakauki, M. (2021). Improving Motor Skills in Early Childhood through Goal-Oriented Play Activity. *Children (Basel, Switzerland)*, 8(11), 994. https://doi.org/10.3390/children8110994

[29] Taktek, K., Zinsser, N., Fielitz, L., Corbari, G., Miller, S., & John, R. S. (2019). Learning how to prepare athletes for peak performance: Use of mental imagery training as a psychological strategy to enhancing motor learning, retention and transfer of sport rifle marksmanship. *Journal of Sport and Human Performance*, *7*(1).

[30] Teaching Progressions for Motor Skill Attainment. (2018). Retrieved https://study.com/academy/lesson/teaching-progressions-for-motor-skill-attainment.html.