



## Information about the course

**Degree:** Bachelor of Sciences of Physical Activity and Sport

**Faculty:** Faculty of Physical Activity and Sport Sciences

**Code:** 280101 **Name:** Motor Learning and Development

**Credits:** 6,00 ECTS **Year:** 1 **Semester:** 1

**Module:** 2) Obligatory Formation module

**Subject Matter:** Sports Fundamentals **Type:** Obligatoria

**Branch of knowledge:** Health Sciences

**Department:** -

**Type of learning:** Classroom-based learning

**Language/-s in which it is given:** Spanish

### Teachers:

1162DG	<u>Ignacio Ballester Esteve</u> (Profesor responsable)	ignacio.ballester@ucv.es
281A	<u>Cristina Monleon Garcia</u> (Profesor responsable)	cristina.monleon@ucv.es
281B	<u>Laura Elvira Macagno</u> (Profesor responsable)	laura.elvira@ucv.es
281C	<u>Cristina Monleon Garcia</u> (Profesor responsable)	cristina.monleon@ucv.es
281D	Antonio Vidal Matzanke (Profesor responsable)	antonio.vidal@ucv.es
281X	Antonio Vidal Matzanke (Profesor responsable)	antonio.vidal@ucv.es



## Module organization

### 2) Obligatory Formation module

Subject Matter	ECTS	Subject	ECTS	Year/semester
Manifestations of human motor skills	18	Body Language	6	1/1
		Perceptual Motor Skills	6	1/2
		Physical Activity in Nature	6	2/2
Sports Fundamentals	42	Adapted Sport and Inclusive Physical Activity	6	2/2
		Adversary Sports	6	2/1
		Individual Sports	6	2/1
		Motor Learning and Development	6	1/1
		Native Sports and Games	6	1/2
		Team Sports	6	2/2
		Training Theory and Practice in PA	6	2/2



## Learning outcomes

Al finalizar la asignatura, el estudiante deberá demostrar haber adquirido los siguientes resultados de aprendizaje:

### R23 - Identify, Express, and Reason About Different Manifestations of Human Movement.

Learning outcomes of the specified title

#### **Type of AR:** Habilidades o Destrezas

- Adapt the educational intervention to the individual characteristics and needs for the entire population and with emphasis on special populations such as: schoolchildren, older people (seniors), people with reduced mobility and people with pathologies, health problems or assimilated (diagnosed and/or prescribed by a doctor), taking into account gender and diversity.
- Apply the principles derived from the concept of integral ecology in your proposals or actions, whatever the scope and area of knowledge and the contexts in which they are proposed.
- Develop theoretical-practical responses based on the sincere search for the full truth and the integration of all dimensions of the human being when faced with the great questions of life.
- Respect and put into practice the ethical principles and action proposals derived from the objectives for sustainable development, transferring them to all academic and professional activities.
- Understand, develop and know how to apply the procedures, strategies, activities, resources, techniques and methods that intervene in the teaching-learning process efficiently, developing the entire course of action in all sectors of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; direction of physical activity and sports).

#### **Type of AR:** Competencias



- Fluently develop procedures and protocols to solve unstructured, unpredictable and increasingly complex problems, articulating and displaying mastery of the elements, methods, processes, activities, resources and techniques that make up basic motor skills, physical activities, sports skills, play, expressive bodily and dance activities, and activities in nature in an appropriate, efficient, systematic, varied and methodologically integrated way for the entire population and with emphasis on special populations such as: older people (seniors), schoolchildren, people with disabilities and people with pathologies, health problems or similar (diagnosed and/or prescribed by a doctor), taking into account gender and diversity and in any sector of professional intervention of physical activity and sport (formal and informal physical education -sports; physical and sports training; physical exercise for health; direction of physical activity and sports).

## R24 - Compare, Decide, and Apply Optimal Learning Strategies and Pedagogical Principles Based on Group Characteristics in Different Physical-Sports Contexts.

Learning outcomes of the specified title

### **Type of AR:** Habilidades o Destrezas

- Adapt the educational intervention to the individual characteristics and needs for the entire population and with emphasis on special populations such as: schoolchildren, older people (seniors), people with reduced mobility and people with pathologies, health problems or assimilated (diagnosed and/or prescribed by a doctor), taking into account gender and diversity.
- Apply the principles derived from the concept of integral ecology in your proposals or actions, whatever the scope and area of knowledge and the contexts in which they are proposed.
- Communicate and interact appropriately and efficiently, in physical and sports activity, in diverse intervention contexts, demonstrating teaching skills in a conscious, natural and continuous way.
- Design and apply the methodological process integrated by observation, reflection, analysis, diagnosis, execution, technical-scientific evaluation and/or dissemination in different contexts and in all sectors of professional intervention in physical activity and sports.
- Develop theoretical-practical responses based on the sincere search for the full truth and the integration of all dimensions of the human being when faced with the great questions of life.
- Respect and put into practice the ethical principles and action proposals derived from the objectives for sustainable development, transferring them to all academic and professional activities.
- Understand, develop and know how to apply the procedures, strategies, activities, resources, techniques and methods that intervene in the teaching-learning process efficiently, developing the entire course of action in all sectors of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; direction of physical activity and sports).



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**R25 - Adapt Physical Activities (AF) Tasks by Applying Basic Principles of Learning and Motor Development to Address Different Ages, Levels, and Contexts.**

Learning outcomes of the specified title

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**Type of AR:** Habilidades o Destrezas

- Adapt the educational intervention to the individual characteristics and needs for the entire population and with emphasis on special populations such as: schoolchildren, older people (seniors), people with reduced mobility and people with pathologies, health problems or assimilated (diagnosed and/or prescribed by a doctor), taking into account gender and diversity.
- Apply the principles derived from the concept of integral ecology in your proposals or actions, whatever the scope and area of knowledge and the contexts in which they are proposed.
- Design and apply the methodological process integrated by observation, reflection, analysis, diagnosis, execution, technical-scientific evaluation and/or dissemination in different contexts and in all sectors of professional intervention in physical activity and sports.
- Develop theoretical-practical responses based on the sincere search for the full truth and the integration of all dimensions of the human being when faced with the great questions of life.
- Respect and put into practice the ethical principles and action proposals derived from the objectives for sustainable development, transferring them to all academic and professional activities.
- Understand, develop and know how to apply the procedures, strategies, activities, resources, techniques and methods that intervene in the teaching-learning process efficiently, developing the entire course of action in all sectors of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; direction of physical activity and sports).



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## Type of AR: Competencias

- Fluently develop procedures and protocols to solve unstructured, unpredictable and increasingly complex problems, articulating and displaying mastery of the elements, methods, processes, activities, resources and techniques that make up basic motor skills, physical activities, sports skills, play, expressive bodily and dance activities, and activities in nature in an appropriate, efficient, systematic, varied and methodologically integrated way for the entire population and with emphasis on special populations such as: older people (seniors), schoolchildren, people with disabilities and people with pathologies, health problems or similar (diagnosed and/or prescribed by a doctor), taking into account gender and diversity and in any sector of professional intervention of physical activity and sport (formal and informal physical education -sports; physical and sports training; physical exercise for health; direction of physical activity and sports).

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## R26 - Ground, Develop, and Adapt Physical-Sports Teaching-Learning Processes in Formal and Non-Formal Educational Settings, Considering Diversity.

Learning outcomes of the specified title

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### Type of AR: Habilidades o Destrezas

- Adapt the educational intervention to the individual characteristics and needs for the entire population and with emphasis on special populations such as: schoolchildren, older people (seniors), people with reduced mobility and people with pathologies, health problems or assimilated (diagnosed and/or prescribed by a doctor), taking into account gender and diversity.
- Apply the principles derived from the concept of integral ecology in your proposals or actions, whatever the scope and area of knowledge and the contexts in which they are proposed.
- Design and apply the methodological process integrated by observation, reflection, analysis, diagnosis, execution, technical-scientific evaluation and/or dissemination in different contexts and in all sectors of professional intervention in physical activity and sports.
- Develop theoretical-practical responses based on the sincere search for the full truth and the integration of all dimensions of the human being when faced with the great questions of life.
- Respect and put into practice the ethical principles and action proposals derived from the objectives for sustainable development, transferring them to all academic and professional activities.



- Understand, develop and know how to apply the procedures, strategies, activities, resources, techniques and methods that intervene in the teaching-learning process efficiently, developing the entire course of action in all sectors of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; direction of physical activity and sports).

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### **Type of AR:** Competencias

- Fluently develop procedures and protocols to solve unstructured, unpredictable and increasingly complex problems, articulating and displaying mastery of the elements, methods, processes, activities, resources and techniques that make up basic motor skills, physical activities, sports skills, play, expressive bodily and dance activities, and activities in nature in an appropriate, efficient, systematic, varied and methodologically integrated way for the entire population and with emphasis on special populations such as: older people (seniors), schoolchildren, people with disabilities and people with pathologies, health problems or similar (diagnosed and/or prescribed by a doctor), taking into account gender and diversity and in any sector of professional intervention of physical activity and sport (formal and informal physical education -sports; physical and sports training; physical exercise for health; direction of physical activity and sports).

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## R27 - Select the Appropriate Exercise for Physical Activity Prescription Based on Theoretical-Practical Foundations, Addressing the Needs of Each Population and Context.

Learning outcomes of the specified title

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### **Type of AR:** Habilidades o Destrezas

- Adapt the educational intervention to the individual characteristics and needs for the entire population and with emphasis on special populations such as: schoolchildren, older people (seniors), people with reduced mobility and people with pathologies, health problems or assimilated (diagnosed and/or prescribed by a doctor), taking into account gender and diversity.

- Apply the principles derived from the concept of integral ecology in your proposals or actions, whatever the scope and area of knowledge and the contexts in which they are proposed.

- Design and apply the methodological process integrated by observation, reflection, analysis, diagnosis, execution, technical-scientific evaluation and/or dissemination in different contexts and in all sectors of professional intervention in physical activity and sports.

- Develop theoretical-practical responses based on the sincere search for the full truth and the integration of all dimensions of the human being when faced with the great questions of life.



- Respect and put into practice the ethical principles and action proposals derived from the objectives for sustainable development, transferring them to all academic and professional activities.
- Understand, develop and know how to apply the procedures, strategies, activities, resources, techniques and methods that intervene in the teaching-learning process efficiently, developing the entire course of action in all sectors of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; direction of physical activity and sports).

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### **Type of AR:** Competencias

- Fluently develop procedures and protocols to solve unstructured, unpredictable and increasingly complex problems, articulating and displaying mastery of the elements, methods, processes, activities, resources and techniques that make up basic motor skills, physical activities, sports skills, play, expressive bodily and dance activities, and activities in nature in an appropriate, efficient, systematic, varied and methodologically integrated way for the entire population and with emphasis on special populations such as: older people (seniors), schoolchildren, people with disabilities and people with pathologies, health problems or similar (diagnosed and/or prescribed by a doctor), taking into account gender and diversity and in any sector of professional intervention of physical activity and sport (formal and informal physical education -sports; physical and sports training; physical exercise for health; direction of physical activity and sports).





## Assessment system

### Modalidad presencial

Assessed learning outcomes	Granted percentage	Assessment tool
R23, R24, R25, R26, R27	50,00%	Written and/or practical tests.
R24, R25, R26, R27	20,00%	Exercises and Practices in the Classroom.
R23, R24, R25, R26, R27	30,00%	Non-face-to-face autonomous work.

### Observations

The student may keep the assessment instruments passed for the 3 years following the first registration.

It is necessary to obtain 50% in all assessment instruments to pass the course.

According to article 4.2. of the Guidelines for Assessment at the UCV, the limit of absences that may be due to eventualities (medical consultation, bureaucratic procedures...) that do not have to be justified, is 30%.

Attendance at all practical sessions indicated in the schedule is mandatory. Additionally, for this subject, if the student does not attend 80% of these, the student will fail the two sessions of the course, having to make them up in the following registration.

If the student does not meet any of these criteria, the student will be graded with a maximum of 4.5.

### OTHER CLARIFICATIONS

#### Written/oral and/or practical tests

Final single exam. Essay questions and/or multiple choice test questions (with standard penalty system\*).

#### Active participation



Preparation and delivery of face-to-face activities and practices in the classroom.

### **Independent work.**

Completion and delivery of individual or group activities through the teaching platform. These activities can be: session analysis, analysis of the factors that influence the sporting career of an elite athlete, preparation of curricular materials, reading books, etc.

\*Standard penalty system

No options = No subtraction

2 options = 1 wrong subtracts 100%

3 options = 1 wrong subtracts 50%

4 options = 1 wrong subtracts 33.3%

5 options = 1 wrong subtracts 25%

6 options = 1 wrong subtracts 20%

The detailed explanation (procedure for the assignments) as well as the evaluation tools (sheets or rubrics) for each section will be posted on each group's platform at the student's disposal.

## Actividades formativas

The methodologies to be used so that the students reach the expected learning outcomes will be the following:

- M1 Attendance at practices.
- M2 Resolution of problems and cases.
- M3 Discussion in small groups.
- M4 Practical laboratories.
- M5 Presentation of content by the teacher.
- M6 Practical lesson.
- M7 Group dynamics and activities.

### **IN-CLASS TRAINING ACTIVITIES**



ACTIVITY	RELATIONSHIP WITH THE COURSE LEARNING OUTCOMES	METHODOLOGY	HOURS	ECTS
<b>THEORETICAL CLASS:</b> Presentation of contents by the teacher. Competency analysis. Demonstration of capabilities, skills and knowledge in the classroom.	R23, R24	Resolution of problems and cases. Presentation of content by the teacher. Practical lesson.	34,00	1,36
<b>PRACTICAL CLASS / SEMINAR:</b> Group dynamics and activities. Resolution of problems and cases. Practical laboratories. Data search, computer classroom, library, etc. Meaningful construction of knowledge through student interaction and activity.	R25, R26, R27	Attendance at practices. Resolution of problems and cases. Discussion in small groups. Practical laboratories. Practical lesson. Group dynamics and activities.	18,00	0,72
<b>EVALUATION:</b> Set of oral and/or written tests used in the evaluation of the student, including the oral presentation of the final degree project.	R23, R24, R25, R26, R27	Resolution of problems and cases.	4,00	0,16
<b>TUTORING:</b> Supervision of learning, evolution. Discussion in small groups. Resolution of problems and cases. Presentation of results before the teacher. Presentation of diagrams and indexes of the proposed works.	R23, R24, R25, R26, R27	Discussion in small groups.	4,00	0,16
<b>TOTAL</b>			<b>60,00</b>	<b>2,40</b>



## TRAINING ACTIVITIES OF AUTONOMOUS WORK

ACTIVITY	RELATIONSHIP WITH THE COURSE LEARNING OUTCOMES	METHODOLOGY	HOURS	ECTS
GROUP WORK: Problem solving. Preparation of exercises, memoirs, to present or deliver in classes and/or in tutoring.	R23, R24, R25, R26, R27	Resolution of problems and cases. Group dynamics and activities.	30,00	1,20
SELF-EMPLOYED WORK: Study, Individual preparation of exercises, assignments, reports, to present or deliver in classes and/or in tutoring. Activities in platform or other virtual spaces.	R23, R24, R25, R26, R27	Resolution of problems and cases.	60,00	2,40
<b>TOTAL</b>			<b>90,00</b>	<b>3,60</b>



## Description of contents

Descripción de contenidos necesarios para la adquisición de los resultados de aprendizaje.

### Theoretical content:

Block of content	Contents
1 Introduction to the study of motor learning and development: justification, structure and areas of knowledge	1 Introduction to the study of motor learning and development: justification, structure and areas of knowledge
2 Concept and characteristics of motor learning.	2 Concept and characteristics of motor learning.
3 Explanatory models of motor control and learning.	3 Explanatory models of motor control and learning.
4 Processes and phases of motor acquisition.	4 Processes and phases of motor acquisition.
5 Factors that influence motor learning.	5 Factors that influence motor learning.
6 Concept and characteristics of motor development.	6 Concept and characteristics of motor development.
7 Explanatory models of motor development.	7 Explanatory models of motor development.
8 Motor development in the different stages and periods of life.	8 Motor development in the different stages and periods of life.



### Temporary organization of learning:

Block of content	Sessions	Hours
1 Introduction to the study of motor learning and development: justification, structure and areas of knowledge	2	4,00
2 Concept and characteristics of motor learning.	2	4,00
3 Explanatory models of motor control and learning.	3	6,00
4 Processes and phases of motor acquisition.	2	4,00
5 Factors that influence motor learning.	8	16,00
6 Concept and characteristics of motor development.	1	2,00
7 Explanatory models of motor development.	2	4,00
8 Motor development in the different stages and periods of life.	10	20,00



## References

- Batalla Flores, A. (2000). Habilidades motrices. Barcelona: Inde.
- Bezzoli, E., Andreotti, D., Pianta, L., Mascheroni, M., Piccinno, L., Puricelli, L., et al. (2018). Motor control exercises of the lumbar-pelvic region improve respiratory function in obese men. A pilot study. *Disability and Rehabilitation*, 40(2), 152–158.  
<http://doi.org/10.1080/09638288.2016.1244292>
- Blakemore, S. y Frith, U. (2011). *Cómo aprende el cerebro*. Barcelona: Ariel
- Cabezuelo, G., & Frontera, P. (2010). *El desarrollo psicomotor: Desde la infancia hasta la adolescencia*. Madrid: Narcea.
- Cano de la Cuerda, R., Martínez Piédrola, R.M y Miangolarra Page, J.C. (2017). *Control y aprendizaje motor. Fundamentos, desarrollo y reeducación del movimiento humano*. Madrid: Editorial Médica Panamericana
- Carrasco, D. G., & Cantalapiedra, J. A. (2016). Efectividad de la imaginería o practica mental en la recuperación funcional tras el ictus: revisión sistemática. *Neurología*, 31(1), 43-52.
- Carrasco, D. G., & Cantalapiedra, J. A. (2016). Effectiveness of motor imagery or mental practice in functional recovery after stroke: a systematic review. *Neurología (English Edition)*, 31(1), 43-52.
- Conte, L y col. ( 2007). *Las 10 claves del aprendizaje motor*. Madrid: Adal.
- Chua, L. K., Dimapilis, M. K., Iwatsuki, T., Abdollahipour, R., Lewthwaite, R., & Wulf, G. (2019). Practice variability promotes an external focus of attention and enhances motor skill learning. *Human movement science*, 64, 307-319
- de Quel Pérez, Ó. M., & Quintana, M. S. (2014). Sobre la expresión “respuesta de reacción” y el concepto “tiempo de respuesta”. *Apuntes Educación Física y Deportes*, (118), 88-92.
- Díaz, J. (1999). *La enseñanza y aprendizaje de las habilidades y destrezas motrices básicas*. Barcelona: Inde.
- Domjan, M. (2007). *Principios de aprendizaje y conducta*. Editorial Paraninfo.
- Duran-Lluisaca, C. L., Aldas-Arcos, H. G., Ávila-Mediavilla, C. M., & Heredia-León, D. A. (2020). Evaluación de capacidades físicas básicas en edades tempranas orientada a la iniciación deportiva. *Revisión literaria. Polo del Conocimiento*, 5(11), 277-296.
- Ellis, J. (2007). *Aprendizaje Humano*. Madrid: Pearson.
- Famose, J.P. (1992). *Aprendizaje motor y dificultad en la tarea*. Barcelona: Paidotribo. Barcelona: Inde.
- Famose, J.P. (1999). *Cognición y rendimiento*. Barcelona: Inde.
- Ferré, J. y Ferré, M. (2005). *El desarrollo neuro-senso-psicomotriz de los tres primeros años de vida*. España: Jorge Ferré Veciana.
- Fernandez, E et. Al. (1999). *Escalas para la evaluación de las habilidades motrices básicas*. Madrid: CIDE.
- Fernández del Olmo, M.A. (2012). *Neurofisiología aplicada a la actividad física*. Madrid: Síntesis
- Ferreros, M<sup>a</sup> L. ( 2006). *Enséñale a aprender*. Barcelona: Planeta.
- Fisher-price juguetes. *Guía: El desarrollo de tu bebé a través del juego*.



- Gessel, A (1988). El niño de 1 a 4 años. Barcelona: Paidós.
- Granda, J. y Alemany, I (2002). Manual de aprendizaje y desarrollo motor. Barcelona: Paidós.
- Guillot, A., & Collet, C. (2008). Construction of the motor imagery integrative model in sport: a review and theoretical investigation of motor imagery use. *International Review of Sport and Exercise Psychology*, 1(1), 31-44.
- Haba juguetes. Catalogo de productos. Juguetes buenos para niños.
- Hick, W.E. (1952). On the rate of gain of information. *Quarterly Journal of Experimental Psychology*, vol. 4, pp.11-36.
- Imaginarium juguetes. (2010). Colección: juega conmigo. Guía para jugar y aprender con tus hijos. 4 volúmenes de 0 a 8 años.
- Izquierdo, E. G., & Tendero, G. R. (2017). Análisis del tiempo de compromiso motor en educación física. *EmásF: revista digital de educación física*, (45), 31-51.
- Jensen, E. (2010). Cerebro y aprendizaje. Madrid: Narcea.
- Joyce, D. (2015). *Sports Injury Prevention and Rehabilitation* (1st ed.). Routledge.  
<http://doi.org/10.4324/9780203066485>
- Kandel, E.R., Schwartz, J.H. y Jessell, T.M. (2001). Principios de neurociencia. Madrid: McGrawHill/Interamericana de España.
- Larousse.(2008). Padres. Barcelona: Larousse.
- Latash, Mark L. (2008). Neurophysiological basis of movement. Human Kinetics Europe Ltd.
- Le Boulch, J. (1987). La educación psicomotriz en la escuela primaria. Barcelona: Paidós.
- Le Boulch, J. (1991). El deporte educativo: psicocinética y aprendizaje motor. Barcelona: Paidós.
- Le Boulch, J. (1995). El desarrollo psicomotor desde el nacimiento hasta los 6 años. Barcelona: Paidós.
- Liebenson, C. (2014). *Functional Training Handbook*. Lippincott Williams & Wilkins.
- López, C. (2009). Actividad física y salud para el desarrollo motor en adultos y mayores. Sevilla: Wasceulen.
- Losquadro, L. (2005 ). Cómo desarrollar las habilidades motoras. Desde el nacimiento hasta los 5 años. Barcelona: CEAC.
- Martin, D (2004 ). Metodología del entrenamiento infantil y juvenil. Barcelona: Paidotribo.
- Martínez Marín, M., Moreno Hernández, F. y Ruiz Pérez, L.M. (2014). Control y aprendizaje motor. Madrid: Síntesis.
- Massion, J. (2000). Cerebro y motricidad. Barcelona: Inde.
- Morales Aznar, J., Roca i Balasch, J., Universitat de Barcelona, & Institut Nacional d'Educació Física de Catalunya. (2006). Motricidad y cognición: Un estudio empírico ( tesis doctoral).
- Molina, E. C. (2002). El proceso de transfer: revisión y nuevas perspectivas. *EduPsykhé: Revista de psicología y psicopedagogía*, 1(1), 69-96.
- Murator, L. M., Lamberg, E. M., Quinn, L., & Duff, S. V. (2013). Applying principles of motor learning and control to upper extremity rehabilitation. *Journal of Hand Therapy*, 26(2), 94–103.  
<http://doi.org/10.1016/j.jht.2012.12.007>
- Oña, A (2005). Actividad física y desarrollo. Sevilla: Wasceulen.
- Oña, A y col. (1999). Control y aprendizaje motor. Madrid, Síntesis.





- Peña,G; Heredia, J.R., ; Lloret, C; Martín, M. y M.E. Da Silva-Grigoletto. Iniciación al entrenamiento de fuerza en edades tempranas: revisión. Rev Andal Med Deporte. 2016;9(1):41–49
- Philip Rice, F. (1997) .Desarrollo humano. Estudio del ciclo vital. Madrid: Pearson Educación
- Piaget, J. & Inhelder, B. ( 1993, 1ª edición1969). Psicología del niño. Madrid: Morata.
- Pons, E & Roquet-Jamal, D. ( 2010). Desenvolupament cognitiu i motor. Barcelona: Altamar.
- Roca, J. (1983).Desarrollo motriz y psicología. Barcelona: Instituto Nacional de Educación Física de Cataluña.
- Rothwell, John (1994). Control of human voluntary movement. Chapman and Hall.
- Ruiz Pérez L. M. (1994). Desarrollo motor y actividades físicas. Madrid: Gymnos.
- Ruiz,L.M.(1994). Deporte y aprendizaje. Procesos de adquisición y desarrollo de habilidades. Madrid: Visor.
- Ruiz, L.M. (1995). La competencia motriz. Madrid: Gymnos
- Ruiz, L.M y Aruza, J (2005). El proceso de toma de decisiones en el deporte: clave de la eficiencia y el rendimiento óptimo. Barcelona: Paidós.
- Ruiz, L.M et. al (2007). Desarrollo, comportamiento motor y deporte. Madrid: Síntesis.
- Ruiz Pérez, L.M., Gutiérrez Sanmartín, M., Graupera Sanz, J.L., Linaza Iglesias, J.L. y Navarro Valdivieso, F. (2014). Desarrollo, comportamiento motor y deporte. Madrid: Síntesis.
- Ruiz Pérez, L.M. (2020). Lecciones sobre Desarrollo Motor: Para estudiantes de Ciencias de la Actividad Física y del Deporte. Amazon.
- Ruiz Pérez, L.M. (2021). Educación Física y baja competencia motriz. Ediciones Morata.
- Ruiz Pérez, L.M. (2020). Deporte y aprendizaje: procesos de adquisición y desarrollo de actividades. Madrid: Antonio Machado.
- Sage, G. H. (1984) Motor learning and control. Dubuque,Wm. C. Brown. Iowa.
- Sánchez, F (1992). Bases para una didáctica de la educación física y el deporte. Madrid: Gymnos.
- Schmidt, R. (1991) Motor learning and performance: from principles to practice. Champaign: Human kinetics.
- Schmidt, R.A. y Lee, T. (2011). Motor Control and Learning. A behavioral emphasis. Champaign, I.L.: Human Kinetics. Schmidt, R.A. y Wrisberg. (2008). Motor Control.
- Sherindan, M. (2003). Desde el nacimiento hasta los 5 años: Proceso evolutivo, desarrollo y progresos infantiles. Madrid: Narcea.
- Schunk. D (1998). Teorías del aprendizaje. Madrid: Pearson Educación.
- SHUMWAY-COOK, A (2019). CONTROL MOTOR DE LA INVESTIGACION A LA PRACTICA CLINICA. Wolters Kluwer.
- Siff, M. C., & Verkhoshansky, Y. (2004). Superentrenamiento (Vol. 24). Editorial Paidotribo.
- Stassen , K (Kathleen Stassen Berger).(2007). Psicología del desarrollo: infancia y adolescencia. Madrid: Ed. Médica Panamericana.
- Tándem, Revista didáctica de la Educación Física Nº 36 ( abril, mayo, junio 2011). El aprendizaje motor. Barcelona: Graó
- Thomas, J & Nelson, J. (2007). Métodos de investigación en actividad física. Barcelona. Paidotribo



- Twombly, E & Gink, G. (2008). Actividades de aprendizaje de 0 a 5 años. Madrid: Narcea.
- Vaca, M. y Varela, M<sup>a</sup> S.( 2008). Motricidad y aprendizaje. Barcelona: Graó.
- van de Laar, M. C., van den Wildenberg, W. P., van Boxtel, G. J., & van der Molen, M. W. (2010). Processing of Global and Selective Stop Signals. Experimental Psychology.
- Velázquez. C. ( 2010). Aprendizaje cooperativo en Educación Física. Barcelona: Inde.