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**Electronic Supplementary Information**

**What Drives Student Learning Outcomes in Compulsory  
Physical Education? Evidence from Vietnam’s Higher  
Education Context**

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**Appendix A. Measurement Items and Constructs**

Construct	Code	Measurement Items	Source
<b>Teaching Methods (TM)</b>	TM1	The lecturer explains PE activities and techniques clearly.	(Guo <i>et al.</i> , 2023; Haerens <i>et al.</i> , 2015; Reeve & Cheon, 2021)
	TM2	The lecturer provides useful feedback during PE practice.	
	TM3	The lecturer organizes PE activities in an engaging, interactive way.	
	TM4	The lecturer encourages students to participate actively in PE classes.	
	TM5	The lecturer adapts teaching methods appropriately to students’ abilities and learning needs.	
<b>Learning Motivation (LM)</b>	LM1	I am interested in participating in PE learning activities.	(Abula <i>et al.</i> , 2020; Leo <i>et al.</i> , 2022; Ryan & Deci, 2000, 2020)
	LM2	I actively participate in PE classes and practice activities.	
	LM3	I make an effort to improve my performance in PE courses.	
	LM4	I feel motivated to participate in PE even when activities are physically demanding.	
	LM5	I recognize the importance of PE for my health and personal development.	
<b>Course Content (CC)</b>	CC1	The PE course content is relevant to students’ needs and interests.	(Moore & Fry, 2017; Mouratidou <i>et al.</i> , 2022; Quennerstedt, 2019)
	CC2	The PE course includes diverse and interesting learning activities.	
	CC3	The PE course provides practical knowledge and skills for lifelong physical activity.	
	CC4	The PE course helps students understand the importance of physical activity for health and well-being.	

<b>Construct</b>	<b>Code</b>	<b>Measurement Items</b>	<b>Source</b>
<b>Facilities (FA)</b>	FA1	Sports facilities and practice spaces are adequate for PE learning activities.	(Abbas, 2020; Teeroovengadum <i>et al.</i> , 2019)
	FA2	Sports equipment used in PE classes is sufficient and usable.	
	FA3	The PE learning environment is safe and supportive.	
	FA4	The university provides appropriate physical conditions for PE learning and practice.	
<b>Learning Outcomes (LO)</b>	LO1	PE courses improve my physical fitness and movement skills.	(Bailey, 2006; Mathunjwa <i>et al.</i> , 2025; Shen & Shao, 2022)
	LO2	PE courses improve my understanding of health and physical activity.	
	LO3	PE courses help me develop teamwork and cooperation skills.	
	LO4	PE courses increase my participation in physical activity.	
	LO5	Overall, I am satisfied with my learning outcomes in PE courses.	