

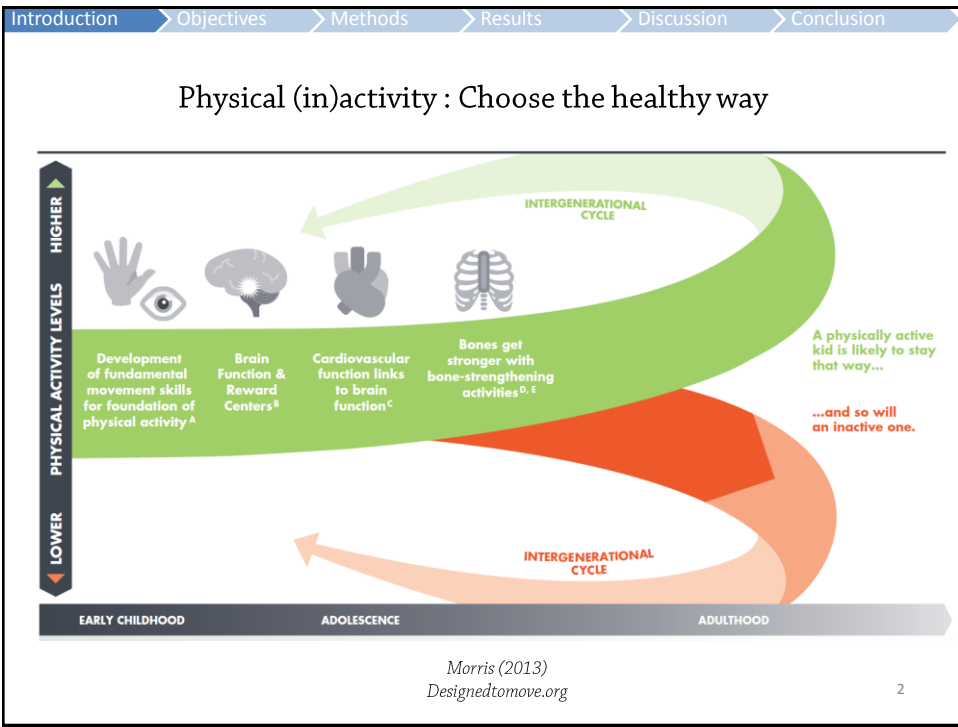


How to determine the place provided to physical activity in a primary school? An attempt to identify objective variables



Mouton, A., Boone, P., & Cloes, M.
Alexandre.Mouton@ulg.ac.be

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Introduction > Objectives > Methods > Results > Discussion > Conclusion

Kids should reach the 60 minutes of PA per day

Corbin, Le Masurier & Lambdin (2007)

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An ecologic perspective: school plays a central role

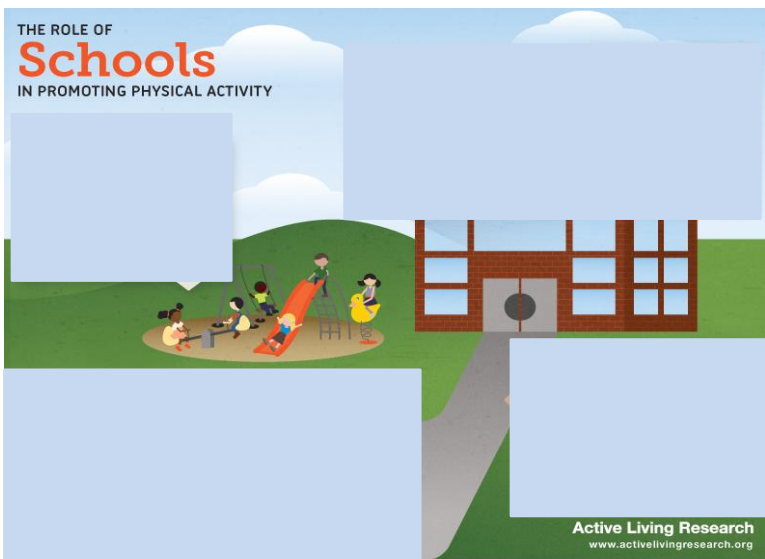
Adapted from Bronfenbrenner (1979); Sallis et al.(2006)

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An ecologic perspective: Schools plays a central role

THE ROLE OF Schools IN PROMOTING PHYSICAL ACTIVITY



Active Living Research
www.activelivingresearch.org

Sources: RECESS: Fernandes N and Sturm R. "The Role of School Physical Activity Programs in Child Body Mass Trajectory" *Journal of Physical Activity and Health*, 8(2): 174-183, February 2011. PE: Cooney J, Mcgrathier C and Neumanhouse D. "The correlation of youth physical activity with state policies." *Contemporary Economic Policy*, 16(1): 128-130, 2007. ACHIEVEMENT: Nelson MC and Corbin-Larsen P. "Physical Activity and Sedentary Behavior Patterns Are Associated With Selected Adolescent Health Risk Behaviors." *Pediatrics*, 117(4): 1281-1286, April 2006. SAFE ROUTES TO SCHOOL: Sivard JR, Riner WF, Mciver KL and Pate RR. "Physical Activity and Active Commuting to Elementary School." *Medicine and Science in Sports and Exercise*, 37(13): 2082-2089, 2005.


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School and PA: What works

What Works to Get Kids Active

Schools and communities can help kids get the 60 minutes of physical activity they need each day



Bassett, D.R. et al. (2013). Estimated Energy Expenditures for School-Based Policies and Active Living. *American Journal of Preventive Medicine*. 42(2), 108-113. Link to paper: <http://www.sciencedirect.com/science/article/pii/S0749379713008027>


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❖ Many « active school » projects are developed worldwide




schulebewegt.ch




manitobainmotion.ca/schools




letsmoveschools.org



actionschoolsbc.ca



moijbouge.com



ophea.net


❖ But few instruments, often based on subjective data, are available to examine PA-related initiatives in schools

Snyers et al. (2014) 7

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1. Identify indicators related to PA in the school context
2. Request the school workers opinion about those indicators
3. Check the relevance of those indicators in real school life settings

➡ Create a reliable tool to assess objective information about PA in schools



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5 consecutives research steps

STEP 1 **Identify indicators related to PA in the school context**

- ❖ Literature review
(keywords: « école bouge »; « school on the move »; « active school »; « school based PA program »)
- ❖ Interaction between researchers

- Focus on the principal, classroom and PE teachers
- Data collection by interviews, questionnaires and documents analysis
- Data should be ascertain by concrete and measurable proof (binary : YES/NO)

Snyers et al. (2014) ; Bradley, & O'Connor (2009) ; Rickwood et al. (2011)

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Introduction > Objectives > **Methods** > Results > Discussion > Conclusion

5 consecutives research steps

STEP 2 **Development of a provisional tool to assess objective data**

- ❖ Literature review and interaction between researchers

- Principal form: (+/-) 85 items + 4 documents + interview
- PE teacher form: 111 items + 11 documents + interview
- Class teacher form: 30 items
- School's official policy analysis: 53 items



Binary items or triangulation of informations provided by school actors

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Introduction > Objectives > Methods > Results > Discussion > Conclusion

5 consecutives research steps

STEP 3 **Pilot study in a primary school** (n=+- 200 pupils)

- ❖ Principal (♂; 45 yrs) form + interview
- ❖ PE teacher form (♂; 30 yrs) + interview
- ❖ Class teacher form (♀; 55 yrs)
- ❖ School's official policy analysis

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5 consecutives research steps

STEP 4 **Tool validation by a group of experts in the field**

- ❖ Focus group (+ 4 hours)
- ❖ 13 experts in primary school

1 school principal	3 PE teachers	1 association supervisor
5 school inspectors	2 pedagogical advisors	1 PA researcher

- ❖ Systematic retranscription and point-by-point adaptations

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5 consecutives research steps



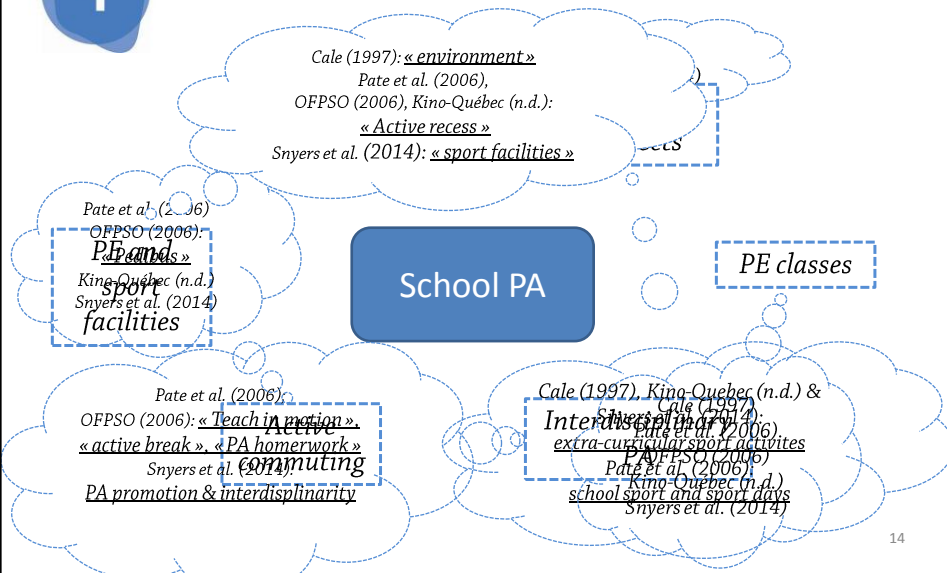
Real-life experimentation of the audit tool

- ❖ Positive discrimination school (n= 282 pupils)
 - ❖ Healthy lifestyle projects (PA & nutrition) in the school
1. Introductory meeting with the principal
 2. Form completion by the class teachers (n=12)
 3. Form completion by the principal
 4. Form completion by the PE teachers (n=3)

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Indicators related to PA in the school context



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STEP 2
data

Development of a provisional tool to assess objective

	School policy	PA school projects	Interdiscip. projects	PA&sport facilities	Active commuting	PE classes
School policy	X	X	X	X	X	X
Principal	If questions	X		X	X	X
Class teacher			X	X		
PE teacher			X	X		X

❖ 335 items to collect

➔ Measurable items: numbers (75), % (3), budget (5), area (5), duration (6), frequency (4), mean (16), dichotomy (109)

➔ Verifiable items: observation (62), proof (10), triangulation (7)

+ 50 non-verifiable items (ex.: "did you read the school policy?")

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STEP 3

Pilot study in a primary school (n=+ 200 pupils)

❖ Principal:

- growing awareness about school PA
- 2 items to add (childcare center PA; Affiliation to a school sport federation)

❖ Class teacher:

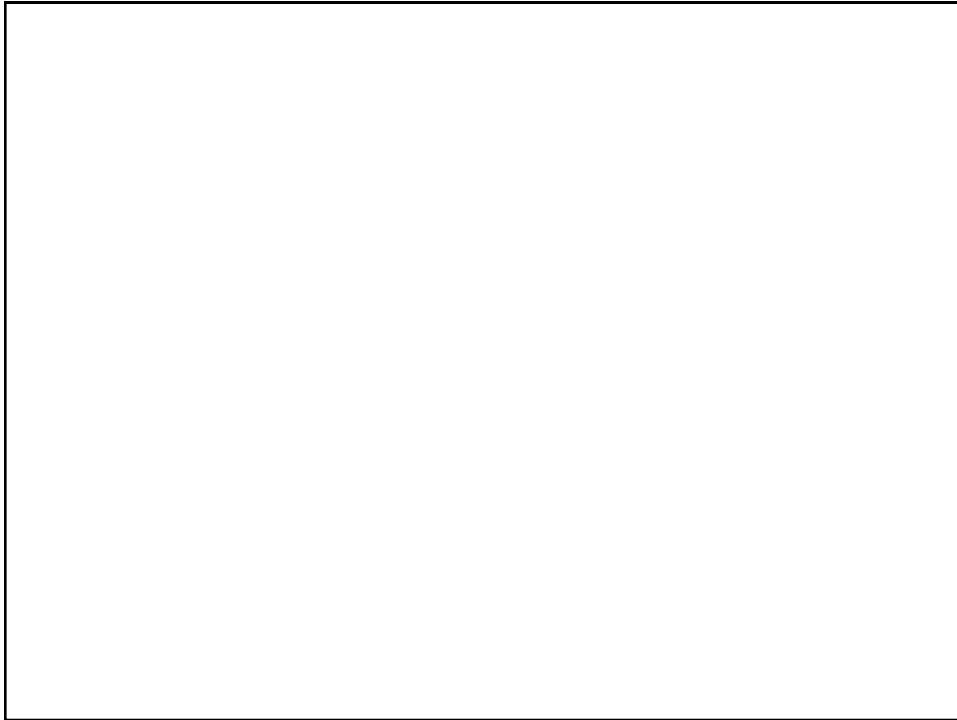
- 1 item to add (duration of the "active breaks")

❖ PE teacher:

- 2 items needed precisions (underlying questions)

➔ Tool usable in the school field

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STEP 4
changes

Tool validation by a group of experts in the field: Main changes

- ❖ School policy:
 - Analyse the 4 policy documents of the school (school policy, school regulations, educational project, internal regulations)
- ❖ Direction form:
 - Distribution of PE classes (2 hours grouped or splitted; swimming lessons)
 - Place given to PE assessment and PE teachers during the class councils
- ❖ Class teacher form:
 - Precise who launched the interdisciplinary initiatives
- ❖ PE teacher form:
 - Communicate about PE classes objectives

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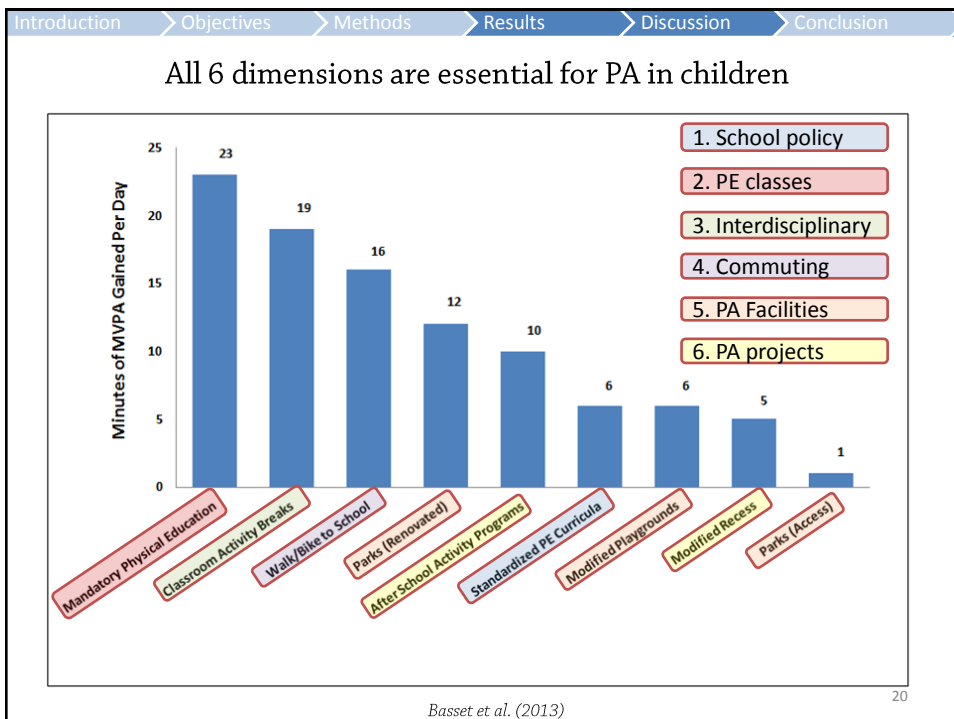
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STEP 5 Real-life experimentation of the audit tool

School PA

- Unawareness of class teachers
- Disagreement between the principal & class teachers
- Agreement between PE teacher
- No active commuting projects in the school
- Poor understanding of questions by class teachers
- Active breaks in 50% of classes
- Few PA homeworks
- Lack of concrete information about PA in all schools from the same city
- PE classes
- Agreement between information provided by the principal & PE teachers
- No proofs but agreement between PE teachers

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- ❖ Experts underlined the validity and completeness of the instrument
- ➔ An audit process contributes to a more relevant reality-perception (Jones et al., 2010)
- ❖ The developed tool go beyond the analysis of the PE context (Huts et al., 2009)
- ➔ Contribution to the monitoring of HEPA initiatives in the school context (Naul et al., 2012)
- ❖ The large number of items to collect (n=337) address some limitations
- ❖ Some items are still based on self-reported data collection
- ➔ Include some observations to complete/replace triangulation ? (Webster & Suzuki, 2014)

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- ❖ Data collection is researcher-dependent
- ➔ Provide an independent an “easy-to-use” coding system to schools
- ❖ For the practitioners, participating to the data collection is a means to become aware of what the school (should) propose
- ➔ Go further by providing feedbacks and emerging good practice



Dell'Amico (2015)

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Thank you for your attention



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References

1. Bassett, D. R., Fitzhugh, E. C., Heath, G. W., Erwin, P. C., Frederick, G. M., Wolff, D. L., ... & Stout, A. B. (2013). Estimated energy expenditures for school-based policies and active living. *American journal of preventive medicine*, 44(2), 108-113.
2. Bradley, O'Connor. (2009). The development of a resource for physically active school setting. *ACHPER Healthy Lifestyles Journal*, 56 (2).
3. Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
4. Cale, L. (1997). Promoting physical activity through the active school. *The British Journal of Physical Education*, 28, 1, 19-21.
5. Corbin, C., Le Masurier, G., & Lambdin, D. (2007). *Fitness for life Middle School*. Human Kinetics.
6. Dell'Amico, V. (2015). *Expérimentation d'un outil internet destiné à analyser la place accordée à l'activité physique au sein des écoles primaires*. Mémoire de master en Sciences de la motricité non publié. Liège, Belgique : Université de Liège, Département des Sciences de la motricité.
7. Huts, K., Van Hoecke, J., De Knop, P., & Theeboom, M. (2009). Preliminary analysis of the (process and product) quality of physical education in Flemish secondary schools: Implementation of IKLO. *US-China Education Review*, 7, 6, 45-60.
8. Jones, N. R., Jones, A., van Sluijs, E. M. F., Panter, J., Harrison, F., & Griffin, S. J. (2010). School environments and physical activity: the development and testing of an audit tool. *Health and place*, 16, 776-783.
9. Morris, C. (2013). Designed to Move. *National Civic Review*, 102(4), 55-56. doi: 10.1002/ncr.21157

References

10. Office fédéral du sport (OFSP). (2006). L'école bouge. Site internet consulté le 18 juin 2013 sur : <http://www.schulebewegt.ch/internet/Schulebewegt/fr/home.html>
11. Naul, R., Schmelt, D., Dreiskaemper, D., Hoffmann, D., & Ihoir, M. (2012). 'Healthy children in sound communities'(HCSC/gkgk)—a Dutch–German community-based network project to counteract obesity and physical inactivity. *Family practice*, 29(suppl 1), i110-i116.
12. Pate, R., Davis, M., Robinson, T., Stone, E., McKenzie, T. & Young, J. (2006). Promoting Physical Activity in Children and Youth: A Leadership Role for Schools: A scientific Statement From the American Heart Association Council on Nutrition, Physical Activity, and Metabolism (Physical Activity Committee) in collaboration with the Councils on Cardiovascular Disease in the Young and Cardiovascular Nursing. *Circulation*, 114, 1214-1224.
13. Rickwood, G., Temple, V., & Meldrum, J. (2011). The validity and reliability of a school-based physical activity opportunities survey. *PHENex Journal/Revue phénEPS*, 3, 1, 1-13.
14. Sallis, J. F., Cervero, R. B., Ascher, W., Henderson, K. A., Kraft, M. K., & Kerr, J. (2006). An ecological approach to creating active living communities. *Annual Review of Public Health*, 27, 297-322. doi: 10.1146/annurev.publhealth.27.021405.102100
15. Snyers, J., Halkin, A-S, Lejacques, T., Schmit, J., Williot, J., & Cloes, M. (2014). Multidimensional analysis of the importance given to physical activity promotion in secondary schools of French-speaking Belgium. *Global Journal of Health and Physical Education Pedagogy*, 3, 3, 212-227.
16. Webster, C. A., & Suzuki, N. (2014). Land of the Rising Pulse : A Social Ecological Perspective of Physical Activity Opportunities for Schoolchildren in Japan. *Journal of Teaching in Physical Education*, 33, 304-325.