Delphi Expert Consensus Study: Final Report

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July 2023

INTRODUCTION

About EduPASS

Non-formal and informal physical activity, movement, play, and sport (PAMPS) benefit all in the physical, social, and cognitive domains. Therefore, adequate educational programmes for educators active in non-formal settings and coaches active in informal settings in sport clubs (initial education; professional development/in-service education) preparing for the delivery of quality physical activity, movement, play, and sport are of the highest importance.

The following box shows the working definitions for the key concepts of formal, non-formal, and informal learning[1].

Formal learning occurs in education and training institutions, leading to diplomas and other qualifications recognised by relevant national authorities. Formal learning is structured according to educational arrangements such as curricula qualifications and teaching-learning requirements.

Non-formal learning is learning that is in addition to or alternative to formal learning. In some cases, it is also structured according to educational and training arrangements but more flexibly. It usually takes place in community-based settings, the workplace, and through the activities of civil society organisations (which includes groups, non-governmental organisations, labour unions, charitable organisations, faith-based organisations, professional associations, and foundations)[2].

Informal learning is learning that occurs in daily life, in the family, in the workplace, in communities and through the interests and activities of individuals. This includes sports clubs, social clubs, PAMS in public places, parks, and playgrounds. In some cases, the term 'experiential learning' refers to informal learning that focuses on learning from experience. It is unorganised and often unsystematic, yet it accounts for most of any person's lifetime learning.

The EduPASS project partners recognise that one issue for respective curriculum formulation on vocational and higher education levels is what constitutes an educator and a coach for PAMPS, the relationship between these roles within different European education systems, and potential connection points. Therefore, an inclusive approach must be taken, and current European-wide practices must be considered.

Consequently, the project partners are seeking a general approach focusing on the education and training of educators and coaches of PAMPS, allowing an adaptation to

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[1] A special report has also been produced in support of this study. It is entitled 'Formal, Non-formal, and Informal Physical Activity Learning Experiences: clarifying the meanings and usages'.

[2] World Economic Forum (2023). https://www.weforum.org/agenda/2018/04/what-is-civil-society/

national/regional contexts and / or different phases of education and training (initial education; professional development/in-service education).

Because of the diverse accreditation practices of well-established and legally constituted national frameworks across Europe, the need for flexibility in providing educational programmes has to be recognised.

About the EduPASS Delphi Expert Consensus Study

An important step in developing the EduPASS project's knowledge base was to agree and articulate a shared European framework for physical activity and sport in non-formal and informal settings. A group of international, Europe-based experts were invited to take part in a 'Delphi Expert Consensus Study'. The basic idea behind Delphi studies is to draw on the 'wisdom of the crowd' to address complex and / or under-researched topics. In the case of EduPASS, the foci were the fundamental competences underlying non-formal and informal PAMPS.

The recruited experts anonymously replied to repeated, increasingly focused questions, which enabled the project team to find a strong consensus view. The framework adopted for this study was based on the influential OECD 'DeSeCo' (Definition and Selection of Competences) model[3]. DeSeCo proposes categorising competences in four ways:

Knowledge: includes theoretical concepts and ideas, in addition to practical frameworks based on the experience of having performed in the relevant settings;

Skills: the abilities and capacities to carry out processes and be able to use one's knowledge in a responsible way to achieve a goal;

Attitudes: learned tendencies or readiness to evaluate things or react to some ideas, people, or situations in specific ways, either consciously or unconsciously. Attitudes are underpinned by values and beliefs and influence behaviour;

Values: principles and core beliefs shared by individuals and groups that guide and motivate attitudes, choices, and behaviour and serve as broad guidelines for social life.

So, the Delphi study sought insight from the experts in terms of eight domains:

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[3] Ananiadou, K. and M. Claro (2009). 21st Century Skills and Competences for New Millennium Learners in OECD Countries. OECD Education Working Papers, No. 41. OECD Publishing; Rychen, D. S. E., & Salganik, L. H. E. (2001). *Defining and selecting key competencies*. Hogrefe & Huber.

Knowledge	Skills		Knowledge	Skills
	Non-formal learning			Informal learning
Attitudes	Values		Attitudes	Values
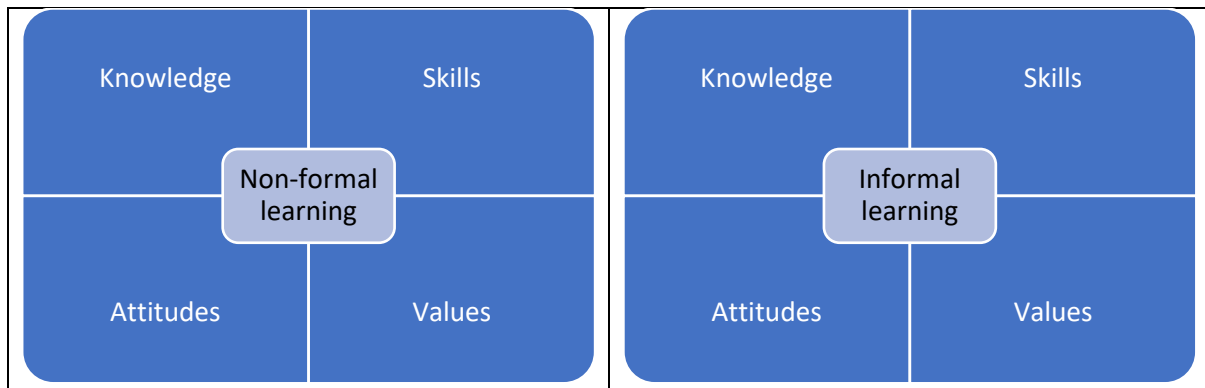
Methods

General Approach

The approach chosen for eliciting an expert group's view was a 3-stage Delphi study, which involves a series of iteratively modified questionnaires to a group of experts until consensus among them is reached or until opinions are stable across rounds of the survey[4]. Delphi was selected for this element of the EduPASS project as it is a widely used research method for eliciting and refining group judgement based on the rationale that a group of experts is better than one expert when exact knowledge is unavailable. In addition, it allows experts to share their ideas, individually and as part of a group, in a manner that avoids potential confrontation of their views. Anonymity throughout the process and multiple rounds of controlled feedback help the research team limit the influence of peer comments. Within the Delphi methodology, the sample size is not aimed at representativeness but is evaluated by the quality of the panel[5].

Applications of the Delphi method highlight its flexibility of use; researchers can customise the process reflecting their needs and context. In the case of the present study, the cohort of experts was initially invited to share their opinions about core aspects of non-formal and informal learning (rather than the more common strategy of responding to statements developed by the project team[6]). These statements were analysed and presented back to the experts for their judgement. This modification notwithstanding, this study adhered to the fundamental principles of the Delphi method: *"(1) anonymous group interactions and responses, (2) multiple rounds of questioning, and (3) the provision of feedback to the group between each round"[7].*

The process is summarised in the figure below:

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[4] Nasa, P., Jain, R., & Juneja, D. (2021). Delphi methodology in healthcare research: how to decide its appropriateness. *World Journal of Methodology*, *11*(4), 116.

[5] Sinclair, J. B., Oyebode, J. R., & Owens, R. G. (2016). Consensus views on advance care planning for dementia: a Delphi study. *Health & social care in the community*, *24*(2), 165-174.

[6] Hirschhorn, F. (2019). Reflections on the application of the Delphi method: lessons from a case in public transport research. *International Journal of Social Research Methodology*, *22*(3), 309-322.

[7] Chalmers, J. & Armour, M., 2019, The Delphi technique. In P. Liamputtong (ed.), *Handbook of Research Methods in Health Social Sciences,* pp. 715– 735*.* Springer.

Round 1	→	Round 2	→	Round 3
Survey Content Generation		Feedback & Analysis of Results		Feedback & Final Analysis
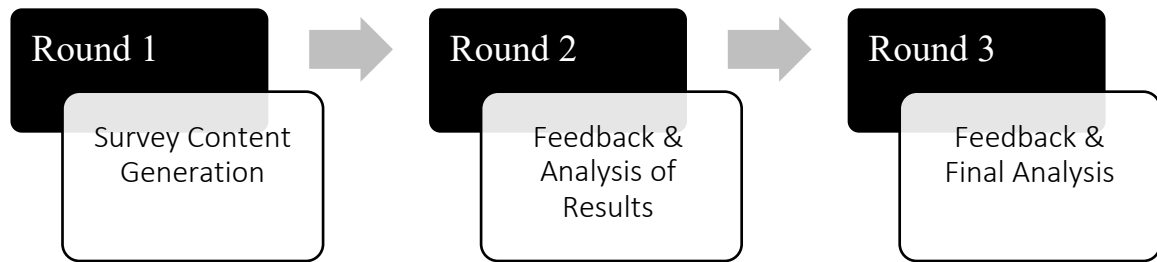
The survey was administered electronically using a specialist survey application (https://www.surveymonkey.com). Data-gathering took place during June and July 2023.

The requested responses were as follows:

Round 1: lists of statements (Group A only; see below)

Round 2: scoring agreement with statements for each list with a 9-point Likert Scale

Round 3: ranking agreement with selected statements for each list

Experts

The project team sought a non-probabilistic, purposive sample of experts. A 4-step procedure identified experts was followed. First, partner organisations within the EduPASS Project suggested individuals with extensive experience in aspects of non-formal and informal learning. Second, project team members identified known researchers and practitioners from across Europe, addressing gaps in region and expertise. Third, a provisional cohort was drafted that balanced subject expertise and geographical coverage. Finally, the selection process was repeated to add new experts to the study. The composition of the expert group is summarised below.

Austria	Italy x2
Belgium	Luxembourg x2
Bosnia and Herzegovina	Malta x2
Cyprus	Netherlands x2
Czech Republic x2	Portugal x8
Finland	Slovakia x2
Republic of North Macedonia x4	Slovenia
France x2	Spain x9
Germany	Sweden
Greece	Switzerland
Hungary	United Kingdom
Ireland	

Seventy-five messages of invitation were sent to identified experts within Europe, and 50 people accepted the invitation, representing a 66.6% response rate. This figure is

significantly higher than the average response rate for online surveys[8] and can be understood as an unusually strong response.

As is evident from this list, the number of responses from different countries varied. However, it is also clear that there was a good geographical representation of the European continent.

Other demographic information is presented below. As can be seen, academics, including University teachers and researchers, formed the largest group (30 experts), followed by school teachers (9). Although this suggests a somewhat unbalanced sample of experts, this pattern does reflect the sample composition of earlier Delphi studies[9].
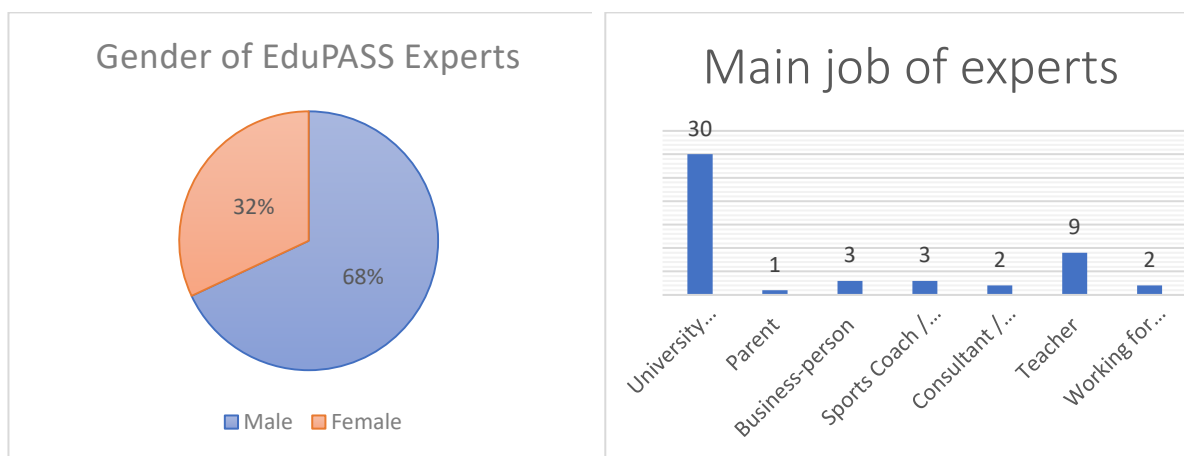
Participants were sent information about the study via email, and a direct link to the online questionnaire, with the landing page reiterating project information and informing participants of the anonymity and confidentiality of individual responses, as well as their right to informed, voluntary consent.

Response Rates

As is typical in repeated-round surveys like Delphi studies, there was a reduction in responses after the first round. However, there was subsequently a slight increase in the final round. Although this is somewhat unusual, all respondents participated in the first round. Therefore, this pattern was judged to be acceptable.

The response rates were as follows:

Round 1   50

Round 2   27

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[8] Wu, M. J., Zhao, K., & Fils-Aime, F. (2022). Response rates of online surveys in published research: A meta-analysis. *Computers in Human Behavior Reports*, 7, 100206.
[9] See, for example, Bailey, R., & Sweeney, R. (2022). Principles and strategies of inclusive physical activity: a European Delphi study. *Journal of Public Health*, 1-8, https://doi.org/10.1007/s10389-022-01770-8.

Round 3   32

Based on the framework discussed above, the experts were invited to answer <u>eight</u> questions:

N 1: What is the KNOWLEDGE necessary to work successfully in NON-FORMAL PAMPS settings?

N2: What SKILLS are necessary to work successfully in NON-FORMAL PAMPS settings?

N3: What ATTITUDES are necessary to work successfully in NON-FORMAL PAMPS settings?

N4: What VALUES are necessary to work successfully in INFORMAL PAMPS settings?

I1: What is the KNOWLEDGE necessary to work successfully in INFORMAL PAMPS settings?

I2: What are the SKILLS necessary to work successfully in INFORMAL PAMPS settings?

I3: What are the ATTITUDES necessary to work successfully in INFORMAL PAMPS settings?

I4: What are the VALUES necessary to work successfully in NON-FORMAL PAMPS settings?

Findings

Round 1

The results of Round 1 (N=50) are presented as Word Clouds due to the large number of responses.

Non-formal knowledge

persons Psychology characteristics abilities only parents
linked Technological learning Essential Expertise guideines Creativity
nonforma organisation Sports Recreation especially Communication
coach/trainer evaluation **development** participants design
about **pedagogical** needs methods voluntary
control didactic principles education
Inclusion **activity** competence laws Exercise kids application
process selected Influence Behaviour Psycho-social
experimental Health **Knowledge** PHYSIOLOGY
competencies background proposed
physical different Understanding children applied
nor Knowledge
requirements safety experience legal Outdoor
psychological community teaching formal Fitness
basics Hdhdh programs age including **content** specific
strategies activities insights support
Intrapersonal Ethical settings approaches basic
management **motor** skills PAMPS **sport** Theoretical
aspects pedagogy regulations movement skills/sport
KINESIOLOGY professional
Practical

Non-formal skills

lead motivational **leadership**
sport Organizational related person
know Interpersonal motivate Planning
differentiating Adaptability competence children
scheduling learning knowing about peoplemotivate
physical shy Communicate Content Being Risk
knowledge Personal SMART PA Constancy Management
achieve Plan structure Listening respect
motivatons Specific design short Reflective
interact practice Active
skill stress teaching **skills** different empathy developments
positive finding manage flexibility
play social fit solving Creativity
transfer Ability goals observer activities PAMPS
Fundamental set Problem use ORGANIZATION
Provide Support environment Inclusion Confidence
objectives Good games strategies analyze self-esteem
levels teachers Communication demonstrate
successfully ones emotional movement long-term
able focus development Pedagogical
create kids capacity

Non-formal attitudes

positive model Sympathy approaches equity personal different diversity
rights Accepting teammates Commitment each Enhance
emphatic couple Include children continuous losing observation
toward Adaptability Knowledge group progress tolerant game
sensitive Encourage Respect passion Learning philantropic
enthousiasm other clear Lifelong
support Grown Content children's child Cooperation
Openness date
Safety inclusion attitudes ethics Fairness
honest Interest
Resilience daily activities individual Positivity
further needsd Sincere tech PAMPS resistance
discrimination Fair own Pedagogical justice importance focus
development kids innovation risk winning
Specific available all FLEXIBILITY being professional
Flexible values integrity
Well-being energetic open fairplay Reflective people's
difficulties motivation RESPONSIBILITY skills

Non-formal values

responsibility Ethics disability religious Ethical
one health participants democratic guidelines world
rights provide equality serve Growth Teamwork
Honesty sport behaviour Positive life.Please
Safety non Collaboration answers.(Please self-regulated
Leadership sports Learning Integrity Equity society
Enjoyment other creating all values activity social
orientation play groups purposeful core reliability
Lifelong Fair respect PAMPS individuals
strongminded etc Honest strong Flexibility gender physical learner
through sharing everyone good justice tolerance
Above equal others learn Community Hhh guide Creativity friendship
beliefs Support Inclusion solidarity
Confidence value environment holistic Variation word self-determined
Cooperation fairness Engagement manners
altruism Focus five Love relationships
Motivation views non-discrimination
Conscientiousness Environmental
Practice

Informal knowledge

movement LEADERSHIP camp overview
Program Interaction
development about Group guide Empirical
includes settings Having
promotion basic Diversity structure responsibility experiential
social skills activities principles
guidelines outdoor creating assignment possibilities
physical sport forms
creativity needs Child's Technology develop diverse aware important
Health content Knowhow background aspects crucial games
Psychology non-verbal
Planning Inclusion knowledge learning
play Being Management
frameworks natural Sensitivity set motor
activity methods nature
Evaluation goals Motricity age education environment
approaches communication cultural ups
PAMPS participants strategies
different Essential theories
Safety inclusive participant preferences
learner-centered Specific belonging Physiology
abilities pedagogical
backgrounds Past exploration
Pedagogy experience informal children
Dynamics traditions

Informal skills

instruction Cooperation included EMOTIONALITY
Co-design carry Motivate conflicts intensives/tournaments
Planning tailor new Communicate progress
solving handle informal Creativity literacy engaging inclusivity
camp understanding adapt Skillful curiosity
problem-solving Physical feedback
find ideas Flexibility pedagogical organisational
Organizational Good needs unexpected demos individual
Sport outcomes PA persistence
dialogue foster Problem Active think emotional
techniques Non-formal Assessment Wide
provide inclusive Adaptability
own Able includes tasks strategies settings
growth mangement activities Conflict group actively
communicative capacity
Observation Support encourage create adjust Facilitation
management interests
important educational child's motor
participant instructions
kids/youngsters Communication participants
Perseverance ability learning Variability
selected Obervational PAMPS offers
exercise Same

Patience energetic inclusion Focus needs fun social capacity
working attitudes informal settings collaboration
willing cooperation Open-mindedness PA process positive
approaches full diversity
leave kid personal Respect empathetic
Maintaining Sensitivity Supportiveness attitude among behavior
Creativity matters fostering being includes sport through toward
showing Help activities camp based problem-solving
attention mindset creating mood Provide
growth goal self promoting ideas views essential
involves PAMPS teamwork understandings engaging
motivation/drive Motivation new cultures
modelling important deliver valuing co-creation
confidence Enjoy Care learning work Enthusiasm
understanding Flexibility open belonging
movement perspectives Students wormharted
experiences setting dangers offers

Determination worm core towards
means Understand learning equity
sense responsibility Enjoyment other personal
fairness player learn involves teaching curiosity
fosters non-discrimination environmental reliability camp
COOPERATIVE natural activities eye Play positive Motivate
sexuality fair together social encourages
Empowerment health fun Fairplay belief colleagues
awareness active rules Inclusive foster
about Ethics Respect continuous importance
others Special behaviour again healthy injuries/defeats
happens Try self fields supportive commos non-formal Integrity holistic
after right cohorts continuously
Lifelong love value sport Commitment upon experience
ensures promoting values emphasizes
take ethnic freedom Sincerity collaboration growth lifestyle
Passion opportunities participants Cooperation
Empathy inclusion based excellence
conservation

Round 2

The findings from Round 1 give us an insight into how the experts conceptualise the competences underlying learning in non-formal and informal settings. Round 2 provided the opportunity to refine these ideas, reduce their number, and move towards a consensual list of competences suitable for guiding the development of professional programmes.
The process for creating the Round 2 list was as follows:

1. Removal of exact or near-exact duplicates (for example, 'collaboration', 'collaborative', and 'collaborative work' were treated as the same theme);
2. Consolidation of competences (for example, 'knowledge of assessment' was moved from 'skills' to 'knowledge'; all references to 'equality' were treated as 'values').

The competences are presented in order of ranking so that the items with the greatest degree of consensus appear higher in the lists.

Non-formal PAMPS			
Knowledge	Skills	Attitudes	Values
Motivation	Communication skills	Positive attitude	Fair play
Participants' needs	Providing a positive learning environment	Motivation	Ethical Practice
Pedagogical knowledge	Conflict resolution	Respect	Respect
Child development	Motivating young people	Empathy	Inclusion
Understanding individual differences	Observation skills	Cooperation	Responsibility
Youth development	Organizational skills	Valuing individual differences	Safety and Well-being
Behaviour management	Listening	Professional ethics	Equality
Creativity and problem-solving skills	Differentiating for different skill levels	Responsibility	Positive Relationships
Health and Safety	Empathy	Enthusiasm	Leadership
Ethical behaviour	Teaching skills	Sensitivity for diversity	Cooperation
The importance of fun	Adaptability	Commitment to Safety and Well-being	Integrity
Collaboration	Teamwork	Emotional intelligence	Friendship
PAMPS activities	Leadership	Open-mindedness	Teamwork
Content knowledge	Planning skills	Passion	Collaboration
Outdoor activities	Problem solving skills	Resilience	Tolerance
Programme design	Enthusiasm	Proactivity	Creativity
Creativity	Reflective practice	Accepting losing and winning the game	Lifelong Learning
Inclusion	Role modelling	Confidence	Autonomy
Working with the community	Observe	Optimism	Sportsmanship
Children's rights	Demonstration skills	Innovation	Solidarity
Growth mindset	Self-directed learning	Assertiveness	Community Engagement
Working with parents	Networking with other groups	Determination	Democratic values
Basic games	Assessment skills		Sustainability
Legal aspects	Technical skills for different sports		Environmental stewardship
Sports Psychology	Assessment		
Volunteering			
Digital literacy skills			
Sociology			

Informal PAMPS			
Knowledge	Skills	Attitudes	Values
Child's interests and preferences	Communication skills	Respecting children's needs and interests	Ethical behaviour
Knowledge of basic motor development	Promoting fun and enjoyment	Enthusiasm	Respect
Group Dynamics and Social Interaction	Conflict management skills	Creativity	Cooperation
Learner-centred approaches	Cooperation skills	Cooperation	Fair play
Basic pedagogical knowledge	Teaching / pedagogical skills	Motivating	Empathy
The role of play and exploration	Motivation	Fun and enjoyment	Inclusion
Knowledge on activities in informal PAMPS	Leadership skills	Empathy	Honesty
Health and safety processes	Active Listening	Patience	Fun and enjoyment
Facilitation techniques	Adaptability	Flexibility	Empowerment
Cultural Sensitivity and Diversity	Inclusion strategies	Encouragement	Equality
Experiential learning methods	Organisational skills	Inclusion	Children's rights
Behavioural management	Problem solving skills	Adaptability	Commitment
Collection of games	Behavioural management skills	Skilful facilitation	Healthy lifestyles
Outdoor Skills and Nature Knowledge	Observational skills	Imagination	Passion
Intervention strategies	Planning skills	Curiosity	Love of sport and physical activity
Developmental psychology	Development of coping strategies	Variety	Learning
The principles and theories of informal education	Facilitation skills	Perseverance	Integrity
Evaluation	Exercise and training applications	Dedication	Lifelong learning
Monitoring and assessment	Digital literacy	Courage	Health
Sport sciences	Monitoring and assessment	Digital literacy	Perseverance
Technology	Athletic Ability (sport-specific)		Determination
			Environmental stewardship
			Democracy

Round 3

The final phase of the Delphi method - Round 3 (N=32) – led to the articulation of lists of core competences supported by levels of agreement among the experts. These core competences - the 'EduPASS Master List' - are represented below. The numbers in brackets show the degree of consensus among the experts, so the higher the number, the greater the degree of agreement.

There are two standard ways of generating a list like this. The first way is to identify a certain score as an indication of consensus; the second way is to choose a number of results. For the purposes of the current study, the latter was chosen as it was judged that a balance of competences across the different domains (Knowledge, Skills, Attitudes, and Values) would be useful and usable for subsequent elements of the EduPASS project.

Non-formal learning

Knowledge
Motivation (8.65)
Participants' needs (8.43)
Pedagogical knowledge (8.22)
Child development (8.17)
Understanding individual differences (8.13)
Youth development (8.0)
Behaviour management (7.96)
Creativity & problem-solving skills (7.83)

Skills
Communication skills (8.7)
Providing a positive learning environment (8.57)
Conflict resolution (8.43)
Motivating young people (8.39)
Listening (8.09)
Observation skills (8.22)
Organisational skills (8.13)
Differentiating for different skill levels (8.04)

Attitudes
Positive attitude (8.61)
Motivation (8.52)
Respect (8.48)
Empathy (8.35)
Valuing individual differences (8.3)
Cooperation (8.3)
Professional ethics (8.22)
Responsibility (8.22)

Values
Fair play (8.43)
Ethical Practice (8.35)
Respect (8.22)
Inclusion (8.17)
Responsibility (8.17)
Safety and Well-being (8.09)
Equality (8.0)
Positive Relationships (8.0)

Informal learning

Knowledge
Child's interests & preferences (7.87)
Knowledge of basic motor development (7.83)
Group Dynamics & Social Interaction (7.74)
Learner-centred approaches (7.52)
Basic pedagogical knowledge (7.43)
The role of play & exploration (7.39)
Knowledge of activities in informal PAMPS (7.3)
Health & safety processes (7.26

Skills
Communication skills (8.3)
Promoting fun and enjoyment (8.3)
Conflict management skills (8.09)
Cooperation skills (8.04)
Teaching / pedagogical skills (8..0)Motivation (7.91)
Leadership skills (7.78)
Active Listening (7.74)

Attitudes
Respecting children's needs and interests (8.39)Enthusiasm (8.35)
Cooperation (8.26)
Motivating (8.26)
Creativity (8.3)
Fun and enjoyment (8.04)
Empathy (8.0)
Patience (8.0)

Values
Ethical behaviour (8.3)
Respect (8.26)
Fair play (8.22)
Cooperation (8.22)
Empathy (7.96)
Inclusion (7.96)
Honesty (7.91)
Fun & enjoyment (7.87)

Conclusion

This is the first expert consensus study of the principles of non-formal and informal participation in sporting and physical activities. It sought insight from an international group of experts about the knowledge, skills, attitudes, and values underpinning effective support for people working in non-formal and informal learning settings. This, it was hoped, would offer an empirical basis for support and development in a domain where very little has been available. Their project's scope and inherent complexity presented certain challenges to the project team. This is not unusual in studies like this. As is always the case with novel and exploratory research, the findings from this study should be considered provisional. More research is needed.

The study has some strengths that should be acknowledged. One strength is the relatively large expert group, at least during the early stages of the study. This supports any claims for representativeness of the findings. Another is the range of geographical backgrounds, with a balance of experts drawn from the four European regions (West and East, North and South). This is important for a study like this, claiming, as it does, a genuinely European perspective. Perhaps the most significant quality of this project is the inclusion of a wide range of competences (knowledge, skills, attitudes, values). It seems that many professional competence studies focus on either knowledge, skills, or both. In the present study, the ambition was to integrate a much more comprehensive range of competences. And, of course, data were gathered in two settings (non-formal and informal).

As is evident from the findings, there is a close similarity between the two sets of findings. We can only guess why this is the case. It might be that the foundational skills for non-formal and informal are essentially the same, with the implication that much of the professional learning opportunities for the two settings might be adequately met by a common programme. In addition, the close similarity between the two final lists presents the possibility of inter-setting collaboration and sharing.

Every research project has its weaknesses or limitations. In this case, there was an over-representation of PE teachers and coaches. The problem with this situation is that non-formal and informal learning are defined precisely in terms of their difference from formal, fully organised sporting activities. However, it might be the case that these teachers and coaches also work in non-formal and informal settings. There is no way to settle this issue with the available information.

Overall, this report presents some fascinating findings that should be considered in planning support and development programmes for people working in PAMPS in non-formal and informal settings. If it serves to act as a stimulus for further research, that would be a bonus!