Original Article

Mountain activities, smart specializations and public priorities

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Abstract

The contemporary research strategy in the European space, is focused on the multidisciplinary approach of some smart specializations as well as the relevance of national public priorities (specific to each European state), representing the engine of a future economic growth on our continent. Within this context, the specialists of the Sport Science and Physical Education fields of activity must orient their own research, towards the areas of smart specialization or towards the so-called declared public priorities, issues that can be addressed only through interdisciplinary strategies.

The present research brings to the attention the mountain landscape as the frame viewed through the sphere of physical activities. 96 students and teachers, from different university specialties (n=9), participants in the project "Adopt a mountain shelter", 2018 and 2019, held in the mountain area of Făgăraș - Fereastră Zmeilor - Romania, were first questioned and then they took part to a Brainstorming debate on the personal concerns regarding the mountain area and the prospect of developing interdisciplinary projects subordinated to the smart specializations and to the public priorities assumed by Romania through public policies.

In the first research phase, the subjects classified 15 items of contemporary mountain activities, according to the annual frequency criteria of their use, but also according to their importance. In the second research phase the subjects were encouraged to develop common ideas and projects, in relation to the subordination of the 15 items to areas of smart specialization and / or public priorities. Following the debates it was established which smart specializations / public priorities should be targeted in the development of ideas related to the mountain area, presented in order of their relevance: health, environment // climate changes and cultural heritage / identity.

Keywords: mountain, smart specializations, public priorities, health, environment, heritage.

Introduction

Through a European consensus, research represents a key area in the development of society as a whole, an important factor in stimulating economic growth. Not all Member States and European regions can excel in all science fields, but each of them has its own potential for excellence. European documents show that smart specializations are currently the safest path to economic progress, based on increased added value and the promotion of highly competitive economic activities. The concept of smart specialization is found on the Europe 2020 Agenda, being a key action for smart, sustainable and inclusive growth [7,8,9]. Smart specialization requires a Member State or a region to select a limited number of priorities, depending on its physical and human potential, so that the impact is as long-lasting as possible. This approach supports European regions / countries to properly recognize and enhance their realistic smart and innovation potential.

At the same time, national policies in the direction of research and innovation must play an increasingly important complementary role, in areas with high public relevance.

Following the extensive consultation process, through the National Strategy for Research Development Innovation 2020 (SNCDI 2020), in relation to the European strategy included in the European Strategy Forum on Research Infrastructures (ESFRI) in Romania, several priority research areas were identified [5,6]:

Table 1. Fields of smart research and public priorities assumed by Romania through the SNCDI 2014-2020

Item No.	Denomination of the research priority	Type of National Recognition (Romania) through SNCDI [5]	Type of European Recognition through ESFRI [6]
1	Energy, Environment and Climate Changes	Smart specialization field	Correlation with the fields "Energy and Environment"
2	Bio-economy	Smart specialization field	Correlation with the field "Health and Food"
3	Eco-Nano-technologies and	Smart specialization field	Correlation with the field "Physical

	Advanced Materials		Sciences and Engineering"
4	Information and Communications Technology - Space and Security	Smart specialization field	Correlation with the field "E-infrastructures"
5	Health	Public priority field	Correlation with the field "Health and Food"
6	Cultural heritage and identity	Public priority field	Correlation with the field "Social and cultural innovation"
7	New and emerging technologies	Public priority field	Correlation with the field "Physical Sciences and Engineering"

The fields of smart specialization are open, in principle, to any scientific discipline and they involve the stimulation of a certain type of economic behavior, with regional or global ambitions and orientation, together with understanding the social impact of science, technology and economic activities in the relevant sectors, resulting in points 1- 4 of table 1 Complementary to the fields of smart research, research and innovation which can also make important contributions in the public field, resulting in a special focus on points 5-7 of table 1.

The purpose of the research

The present research is focused on identifying potential interdisciplinary ideas and projects that could be related to the Scientific Field of Sport Science and Physical Education focused on the environment and the mountain environment, starting from the concerns of the contemporary youth and the society life. The resulting ideas have economic, touristic, ecological, energetic, sporting or artistic implications, on the basis of which the researchers from several scientific fields can generate joint projects.

The subjects

The subjects of the research were selected based on the participation during two consecutive years (2018, 2019), in the project "Adopt a mountain shelter", initiated by the Research Center for Human Performance of the University of Pitești-Romania, in the month of May, of the mentioned years. The academic profile of the 96 participants in the project is presented in the following table:

Table 2 Academic specialization and average age of subjects

	Academic specialization									Total	Average age
	Sports	Informatics	Ecology	Automotive	Law	Chemistry	Acting	Psychology	Others	96	Age Average
Men	14	10	7	7	2	7	0	0	5	52	24 years, 2 months
Women	12	2	5	2	4	4	3	6	6	44	21 years, 7 months

The data provided in table 2 show a wide academic diversity of the subjects, which validates the interdisciplinary character of the research results.

Methodology

Stage 1. The subjects were questioned on the number of visits they had performed in a mountain setting, for 1 year period. A total of 50 students participating in the project "Adopt a mountain shelter - 2018" referred to the actions taken by them in 2017, while 46 students participating in the project "Adopt a mountain shelter - 2019" answered in connection to the individual actions performed in the calendar year 2018. The results of the two projects were summed, resulting in total a number of 203 mountain actions, reported by participants in the two yearly project editions.

Stage 2. The subjects validated the purpose of each mountain visit, from a list of 15 items, extracted from characteristic concerns of the Sport Science of and Physical Education Field and of some scientific reference works: Knez, I, Eliasson I. (2017), Brügger, A., Kaiser, F. G., and Roczen, N. (2011), Brown, G., and Raymond, C. (2007), Hammitt, W. E., Backlund, E. A., and Bixler, RD (2006).

Stage 3. The subjects checked in the order of importance what they considered for each item, from the perspective of vision developing for interdisciplinary projects of development, conservation, enhancement, smart use of the mountain area resources.

Stage 4. The statistical correlation between the number of events and their importance for the development of interdisciplinary projects was calculated.

Step 5. The importance points of the items were summed up and classified by categories of smart fields / policies of public interest were realized.

Results and discussions

The visits / activities reported by the 96 subjects in the mountain area are presented in table 3

Table 3. Mountain actions taken by subjects

	Academic specialization / number of events									Total Events (E)	Total Subjects (S)	E/S
	Sports	Informatics	Ecology	Automotive	Law	Chemistry	Acting	Psychology	Others	203	96	2,11
boys	33	17	23	12	3	9	0	0	9	106	52	2,03
girls	24	4	20	5	4	8	7	14	11	97	44	2,20

Chart 1. Ranking of visits to the mountain area by number of events and their purpose

Table 4. Analysis of the importance of items in relation to smart specializations / public priorities

Item No.	Purpose of participating in the action / event / visit to the mountain area	No. of visits (1)	Importance (Points) (2)	Smart field / public priority (3)	Justification, in relation to the motivation of subordinating the item to a smart field/ public priority (4)
1.	To admire nature and landscape	24	2377	Environment	Pollution, recycling, water resources management
2.	For the purpose of adventure	7	245	Health	Mental health, wellness
3.	To visit historical places or economic infrastructures	13	321	Patrimony	Understanding history and anticipating society, local or global challenges
4.	To practice different sports	18	1505	Health	Individual well-being
5.	To socialize with friends / family	31	2211	Health	Getting well-being condition
6.	For hunting or fishing	8	690	Environment	Conservation of biodiversity
7.	For outdoor recreation	34	3377	Health	Getting well-being condition
8.	For rest	20	677	Health	Getting well-being condition
9.	For educational / team building / study / curricular purpose	11	1123	Health	Optimization of institutional capacities
10.	In connection with the provision of physical work, including environmental actions	18	644	Environment	Pollution elimination, recycling, water resources management
11.	Birds or wildlife watching	5	345	Environment	Support for biodiversity
12.	To take part to festivals / artistic activities	7	233	Environment	Reducing the impact upon the environment
13.	In connection with an action related to spirituality	3	155	Health	Mental health,
14.	To admire / know the traditions and customs of life in the mountain communities	4	233	Patrimony	Understanding history and anticipating society, local or global challenges
15.	Other purpose	0	-	-	-
16.	Total	203	10,080		

The legend:

- (1) - the number of visits analyzed according to the purpose declared by the subjects (results from graph 1);
 (2) - the number of points resulting from the summation of the score declared by each subject on the criterion of item importance in the vision of developing interdisciplinary projects;
 (3) - fields of smart research and public priorities assumed by Romania through the National Strategy for Innovation Development Research 2020
 (4) - general justification accepted by the subjects, based on which they established the importance of items 1-15 in the perspective of developing interdisciplinary projects

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Chart 2. The importance of activities for interdisciplinary projects / ideas

Table 5. Calculation of the statistical correlation between the number of events and their importance

Type of correlation	Data view	r	Sig.(2-tailed)	P
Person Correlation	Number of visits	r=0,499	0,069	p>0,05
	Points of importance			

The calculation of the statistical correlation demonstrates that based on the analyzed data, no significant correlation can be established between the number of visits reported by subjects and the importance of their main purpose in the development of interdisciplinary projects / initiatives [$r = 0.499$; $p > 0.05$]. This is not surprising, as some of the items in the list 1-15 develop contradictory relationships between purpose and importance. For example, "hunting & fishing" is a stated goal of mountain visits for many subjects, but from the perspective of public opinion and European policies, this activity should be monitored (or perhaps diminished) in order to support biodiversity. Also activities such as "sports", "adventure", "artistic festival" sometimes contradict the preservation of an intact mountain environment or the regulations of mountain natural reservations. Maybe that's why interdisciplinary projects come to adapt to the needs of citizens, with environmental policies, nature protection, or by ensuring an environment favouring optimal life on Earth for as long as possible.

Chart 3. Smart fields / public priorities in which interdisciplinary projects / ideas could be started based on the fruition of some means of Sport Science and Physical Education

Based on the analyzed results, we were able to calculate the extent to which the means of physical education and sport can be the basis for the initiation of interdisciplinary projects / ideas (graph 3), noting in the first place the domain (field) "Health", which is quoted with double chances compared to the field "Environment and climate change", The field "Heritage and Cultural Identity", within which the means of physical education and sport could express their usefulness, is not to be ignored either [6].

Conclusions

The European vision correlated with the national one with reference to smart fields or of public interest is the basis for the development of scientific and economic research for each European country. The reference documents for these policies are represented by The ESFRI-Roadmap 2018 [7] (for the European space) and *The National Strategy for Research, Development and Innovation 2014-2020* [5], for the Romanian space.

Physical education and sport must be integrated into European policies on scientific research, contributing to the development of society. This can most often be achieved through an interdisciplinary approach. Mountains represent a form of relief of great importance in the life and the structure of the Earth. The mountain area represents a framework favoring the development of many human activities, being a source of health, action and inspiration. The history of mankind has been interwoven continuously with the exploitation of the mountain in one form or another, the mountain providing prehistoric or modern man shelter and food, molding the man with the most subtle personality features. Also in the contemporary stage, the mountain is always present in man's life, representing a subject and object of scientific research. The means of physical education and sport make the complex approach of the mountain to be possible.

The present research shows that the actions or movement in the mountain area represent a constant in the life of the contemporary youth, students of different specializations, performing on average about two actions / activities / 1 year, for different purposes. The research analyzes the answers of 96 subjects, who have declared a number of 203 mountain actions carried out in a calendar year, for 14 different purposes. The appreciation of the importance of the types of activities generated interpretations of the implication of the physical education and the sport in the scientific research on smart fields and public priorities. Among the analyzed activities, there are those of the "outdoor recreation" type but also "sports", similar both in number and importance, in the initiation of some interdisciplinary ideas / projects. Also activities such as "hunting", "fishing", "adventure", "artistic festival", sometimes contradict the preservation of an intact mountain environment, or the regulations of mountain natural reservations. The summative analysis of the importance of the means of sport and physical education within the mountain project framework highlights three areas from the field of smart research / public priorities, in which specialists can coordinate or collaborate in order to carry out interdisciplinary projects: the most permissive field is the one of "Health" being quoted with double chances compared to the "Environment and Climate Changes", which is approachable, but, in contrast, with low chances for the field "Heritage and Cultural Identity".

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