

WINTER SPORTS ACTIVITIES COURSE FOR FUTURE KINESIOLOGISTS: TRENDS AND CHALLENGES

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Abstract. *The purpose of this paper is to present a model of winter sports activities course organized for bachelor students of kinesiology during 2010 through 2017 with the aim of acquiring two main competencies: (i) methods for and approaches to promoting an effective use of leisure time for individuals and groups through outdoor activities in winter time, and (ii) understanding the content, purpose and process of outdoor winter sports activities. A total of 70 kinesiology students (26 men and 43 women, age 21.5±2.3 years) collaborated in the survey (26.5% response rate, N=264). Students classified their initial level of skiing knowledge as: 16% beginners, 39% average skiers, 23% good skiers and 22% very good skiers. Students detected significant progress in their skiing knowledge (11% excellent progress, 63% good/substantial progress and 26% only slight progress). However, students did not differ in their progress according to their initial ski knowledge ($\chi^2(9)=7.466$, $p<0.05$). 21% of the students achieved the Ski Instructor qualification at the end of program. Ski progress plays an important role in the evaluation of satisfaction with the professional knowledge applicable to future work as a kinesiologist ($\chi^2(2)=7.245$; $p=0.027$) and the course performance from the view of acquired knowledge usefulness applicable to future work as a kinesiologist ($\chi^2(2)=10.289$; $p=0.006$). Results open up new possibilities for further improvements of the winter camp and its activities. Because of the sports field legislation change in 2017, new organizational adjustments are expected.*

Key words: *Alpine Skiing, Education, Organization, Sport, Competencies*

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INTRODUCTION

Slovenia is a country with a long, well documented tradition of skiing, the national sport (Lešnik & Žvan, 2010). Winter sports hold third place among the most popular sports providers in Italy, Germany, Austria, the Czech Republic and Hungary, where sports tourism is one of the largest tourism providers (Vanat, 2015). Winter sports are the main sports tourism provider in Slovenia and Slovakia (Tourism Statistics-Winter Season Occupancy, 2019; Turizem, 2019). Recreational alpine skiing is becoming safer due to the use of protective gear, the introduction of short carving skis, more rigid and comfortable ski boots and better preparations of ski slopes (Johnson, Ettlinger, & Shealy, 2008; Coury et al., 2013). Alpine skiing allows individuals to tailor their recreational skiing to their personal health and physical fitness in order to achieve an optimal skiing intensity while also providing an enjoyable experience (Loland, 2006). Recreational alpine skiing is not only limited to the young, physically fit and healthy population, but often includes less fit individuals and a growing number of middle-aged and elderly skiers (Loland, 1992; Pišot, Paravlič, & Pišot, 2017). In Slovenia, the Ski instruction profession is regulated at the national level (Sports Act, 2017), as it is in the Czech Republic, France, Hungary, Portugal and Slovakia. In Germany - Bavaria, Spain, Italy, and Austria, the ski instructor profession is regulated at regional levels (European Commission, 2015) (Fig. 1).

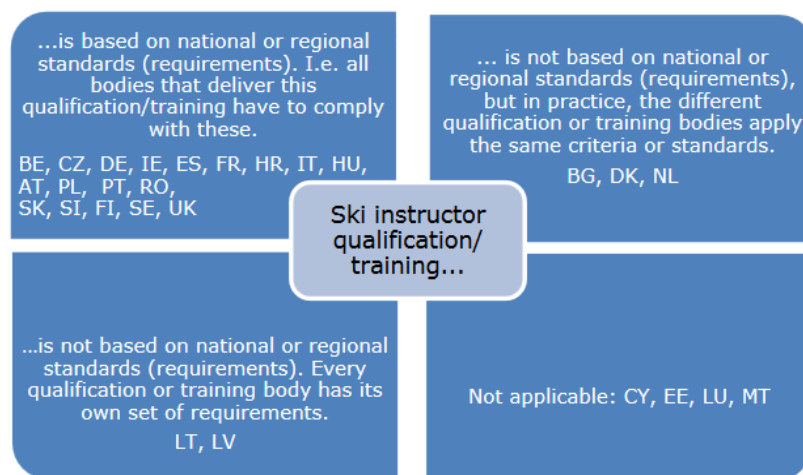


Fig. 1 Existence of standards for the alpine ski instructor qualification/training in European Union (European Commission, 2015)

In a significant majority of countries (in 18 of the EU-28 countries), certain (national or regional) standards, or similar requirements, are in place, with which providers of ski instructor qualifications or training need to comply.

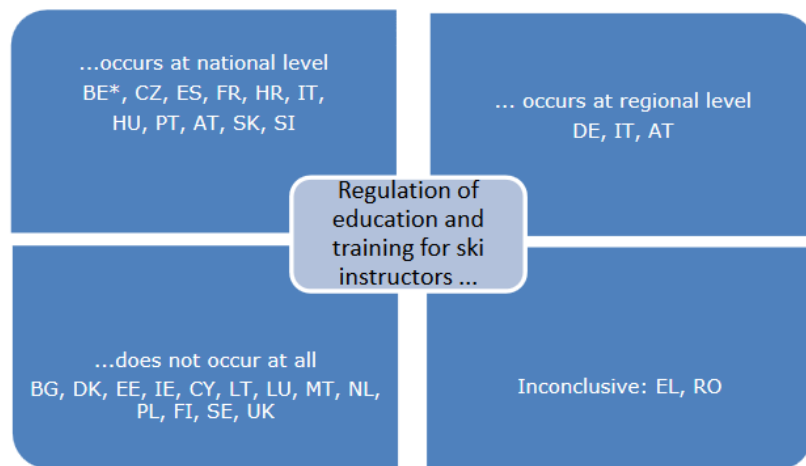


Fig. 2 Regulation of ski instructor education and training in European Union (European Commission, 2015)

Even in countries where neither the profession nor education and training of alpine ski instructors are regulated (Fig. 2), there might be an implicit requirement for ski instructors to possess a certain level of qualification or training. In June 2017, the Sports Act (The Official Gazette of the Republic of Slovenia 22/1998) in Slovenia changed after 19 years. The new Sports Act (The Official Gazette of the Republic of Slovenia 29/2017 and 21/2018) prescribes a 100% increase of content amount to satisfy the lowest criteria to achieve the Alpine Ski Instructor qualification as well as for other programs of professional training in sport areas in Slovenia. Sports Acts from 2017 and 2018 follow the directive on the recognition of professional qualifications and regulation in the European Union (European Parliament, 2013).

The Ski Association of Slovenia and its largest segment - Ski Instructors and Trainers Association of Slovenia (SIAS) - is the professional association representing one of the bases of the development of skiing in Slovenia. Its main goal is to educate high-quality ski instructors and trainers and cooperate intensively with all ski racing disciplines. With more than 80 years of tradition, SIAS has become one of the largest and most successful sports associations in Slovenia. SIAS consists of over 3400 members: about 83 % represent alpine skiing, 8 % snowboarding, 4 % cross country skiing, 3 % ski jumping, 1 % freestyle and freeride skiing, 1 % telemark skiing. According to the level of their professional license they are actively involved in the field of recreational skiing as well as in the training of top level professional athletes (Lešnik, 2017).

The Slovenian national ski school is based on four levels: 1. getting used to skis and basic forms of gliding, 2. basic forms of skiing, 3. advanced forms of skiing, and 4. competitive forms of alpine skiing and derived forms (Lešnik & Žvan, 2010). The core of the school is represented by the basic and advanced forms of skiing that are the basis of the skiing skills of a wide circle of people. The progress in mastering skiing skills depends primarily on the motor abilities of an individual and his/her base of psychomotor information (Lešnik, 2017). It is indisputable that beginners will make progress more easily and faster with the

help of skiing elements that enable more time to carry out the required movements in gliding on skies. At the same time, the instructor's knowledge and skills are certainly important, as is the fact that a ski school enables a fast and effective mastering of technique (Žvan, Lešnik, & Supej, 2012). Movement on the snow in all its forms is the basis of many winter sports, as well as an important part of leisure time activities (Pišot, Kipp, & Supej, 2015; Kipp, 2012). Winter activities have been part of the educational programs in kindergartens, primary and secondary schools and university programs for many years now.

The teaching of skiing is determined by many factors, the ski school being one of the most important. It includes learning the elements of the skiing technique, from the basic forms of gliding and skiing to advanced, and possibly, even competitive forms of skiing (Lešnik & Žvan, 2010). To teach beginners ski movements, teachers try to find the best way of transferring knowledge (Cigrovski, Prlenda, & Radman, 2014). The ski school represents a hierarchy of ski elements. Their level of difficulty of the performance of movement on skies increases, as does the speed. Although various methods of teaching are used worldwide, the goal is the same – to teach as many people as possible to ski as well and as quickly as possible (Lešnik & Žvan, 2010; Pišot et al., 2015). Skiing is a sport requiring a wide range of motor skills and abilities. The skier must learn several different motor tasks through different phases of turns that were determined precisely in the past. Although the intention is to teach skiing skills in the most efficient way possible, we must be aware of the fact that the performance of ski elements at a certain level may be a very demanding task not only for a beginner, but also for a more experienced skier. The number of required motor actions of particular ski elements should be gradually increased, starting with the basic forms of skiing (Lešnik & Žvan, 2010; Pišot et al., 2015; Kipp, 2012; Puhalj & Lešnik, 2018). Alpine skiing is a sport with a significant risk of injury; however, strategies to prevent these include proper acquisition of techniques (Koehle, Lloyd-Smith, & Traunton, 2002).

In the framework of the bachelor study program Applied Kinesiology at the University of Primorska during 2010 through 2017, students were involved in a compulsory course called Winter Sport Activities in Nature, with the aim of acquiring two main competencies: (i) methods for and approaches to an effective use of leisure time for individuals and groups through outdoor activities in winter time, and (ii) understanding of the content, purpose, and process of sports activities in nature. The purpose of this paper is to present the evaluation of this course as derived from students' opinions.

METHODS

Sample of participants

70 students (26 men and 43 women, aged 21.5 ± 2.3 years, Mean \pm Standard Deviation, i.e., $M \pm SD$) responded (26.5% response rate). Figure 3 presents the determination of participants according to the year in which they completed the course.

Percent of participants in the survey sample according to study year

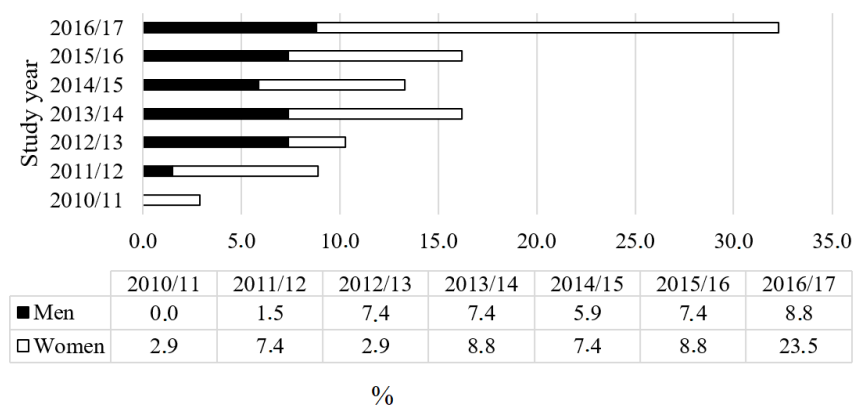


Fig. 3 Percentage of participants according to the year of study in which they participated in the course

Students were classified by the initial level of skiing knowledge as: 16% beginners, 39% average skiers, 23% good skiers, and 22% very good skiers.

The procedure

An online questionnaire was composed in February 2017 and sent to all students of the applied kinesiology study program of the University of Primorska (N=264), who participated in winter activities as part of the study course Winter Sports Activities in Nature during the years 2010 through 2017. We were interested in the students' subjective assessment of: i) the individual progress in skiing knowledge during the Alpine skiing course, ii) the success in achieving the professional qualification of Ski Instructor, and iii) the overall satisfaction with the entire program of the winter course activities. Students evaluated their satisfaction with the course content on a Likert scale from 1 (not satisfied) to 5 (extremely satisfied).

Data analysis

The data were analysed with IBM SPSS Statistics 22.0, using a method of descriptive statistics and the analysis differences. Statistics assumptions were tested. We used χ^2 and the Kruskal-Wallis test for analysis of differences among groups and Dunn's pairwise tests with the Bonferroni correction for post hoc analysis. The statistics significance was set at $p < 0.05$. Data are presented as $M \pm SD$ or as mean rank.

RESULTS

In the first year of the study program, a 6-day winter camp was organized in Forni di Sopra (Italy), which along with its infrastructure provides ideal conditions for effective implementation of the course in the extent of 1.5 ECTS (Plevnik, Gerževič, Pišot, Šturm, Baruca, & Pišot, 2017). According to the Slovenian Quality Assurance Agency for Higher Education (NAKVIS) 1 ECTS presents 30 hours of students' work (including contact work with the professor and his/her independent work) (Slovenian Quality Assurance Agency for Higher Education, 2019). The content of the course was divided into three parts: (i) the Alpine skiing course for all-level skiing knowledge (better skiers have the opportunity to achieve a professional qualification as a Ski Instructor); (ii) introduction to cross-country skiing and snowboarding, and (iii) additional (winter) activities and sports such as ice hockey, ice skating, sledding, night skiing, activities in the gym, swimming, and social activities (Table 1). The Alpine Ski course followed the Slovenian Alpine Skiing School program.

Table 1 Winter activities program for students 2010-2017 (hours of activities per student), performed during six successive days

Winter activity	Hours per student
Alpine skiing	30
Cross country skiing	3
Snowboarding	3
Outdoor winter activities (ice skating and hockey, sledding, night skiing with torches)	4
Theoretical lectures, video-analysis of the alpine skiing technique	5
Total	45

Students noted significant progress in their skiing knowledge (11% excellent progress, 63% good/substantial progress and 26% only slight progress). However, students did not differ in terms of statistical significance in their progress according to their initial ski knowledge ($\chi^2(9)=7.466$, $p<0.05$). 21% of the students were completing or had acquired the Ski Instructor qualification by the end of the program.

We evaluated the students' satisfaction with the substantive realization of the parts of the program (Tables 2 and 3) and satisfaction with the course content applicable to future work as kinesiologists (Table 4).

Table 2 Satisfaction with course content realization

Satisfaction with the substantive realization	Overall (M±SD)
of the overall program	4.4±0.7
of the alpine skiing program	4.3±0.8
of the cross county and snowboarding program	4.3±0.8
of the other outdoor winter activities	4.4±0.7
of the lectures / the theoretical part	3.8±0.7

Table 3 Satisfaction with course organization

Satisfaction with	Overall (M±SD)
difficulty of course content	4.0±0.6
professionalism of the teachers and professors	4.4±0.8
the location (Forni di sopra, Italy)	4.4±0.7
the infrastructure of the area	4.3±0.6

Satisfaction with course content realization and course organization did not differ based on the groups of initial ski knowledge, nor by the groups of ski progress.

Table 4 Satisfaction with the course content applicable to future work as kinesiologists

Satisfaction with	Overall (M±SD)	Slight progress group (Mean rank)	Substantial progress group (Mean rank)	Excellent progress group (Mean rank)	p
professional knowledge applicable to future work as a kinesiologist	3.9 ± 0.8	20.5	32.73	34.0	$\chi^2(2)=7.245$; p=0.027
organizational knowledge applicable to future work as a kinesiologist	3.9 ± 0.8				n.s.
course performance from the view of usefulness of acquired knowledge applicable to future work as a kinesiologist	4.0 ± 0.7	19.11	33.05	38.31	$\chi^2(2)=10.289$; p=0.006

DISCUSSION

Progress in ski knowledge (comparison among groups of slight, substantial and excellent ski knowledge progress) plays an important role in the evaluation of satisfaction with the professional knowledge applicable to future work as a kinesiologist ($\chi^2(2)=7.245$; p=0.027), as well as with the course performance from the view of acquired knowledge usefulness applicable to future work as a kinesiologist ($\chi^2(2)=10.289$; p=0.006). The results of the study indicate that progress in ski knowledge represents a crucial factor in evaluating course content for future work as a kinesiologist. A Kruskal-Wallis test provided very strong evidence of a difference (p<0.006) between the mean ranks of groups for satisfaction with the course performance from the view of content usefulness applicable to future work as a kinesiologist. Dunn's pairwise tests were carried out for the three pairs of groups. There was very strong evidence (p=0.028, adjusted using the Bonferroni correction) of a difference between the groups Slight progress - Substantial progress and (p=0.036, adjusted using the Bonferroni correction) of a difference between the groups Slight progress - Excellent progress. There was no evidence of a difference between the other pairs. It was estimated that the acquired knowledge for further work as kinesiologists is poor for 3%, good for 17%, very good for 55% and excellent for 25% of the students.

Short questionnaires, such as one used in our study, are easily accessible practical instruments for investigation. Alpine ski instructors play a powerful role in influencing skiing beginners both positively and negatively. Instructor's accountability for teaching, as well as for motivation and positive attitude development, impact skiing beginners' activity choices based on their attitudes (Luke & Sinclair, 1991).

Identification of factors associated with students' choice to either use the outdoor winter exercise/sport activities as future kinesiologists or not could provide useful information to teachers who wish to enhance the appeal of their curricular content and instructional practices. Skiing and other winter sports are an enjoyable, exciting activity performed in a stunning outdoor environment (Pišot & Videmšek, 2004; Kipp, 2012; Loland, 2020). Cigrovski, Radman, Matković, Gurmmet, & Podnar (2014) note that the alpine ski course program positively affects an attitude change in favor of alpine skiing and winter activities for participants. Additionally, they conclude that a structured program of skiing can improve the attitude towards alpine skiing.

When ski instructors are familiar with the attitudes and expectations of their skiing beginners in advance, they can adjust the program content to increase interest in skiing and winter activities. Moreover, the ski course program, as a means of structured learning, might positively influence attitudes towards skiing and winter activities and lead to further popularization of sport and physical activity. Changes in national legislation are leading to new organizational as well as substantive adaptations of winter sports programs for future kinesiologists.

CONCLUSION

The purpose of this study was to evaluate the winter sports activities course from the view of future kinesiologists. Evaluation of the implemented activities provides us insight into the students' (users') opinion regarding the quality of the activities undertaken during the winter camp, the quality of the organization and the level of the competencies achieved by the students. Students' feedback opens up new possibilities for further improvements of the winter camp and its activities, maintaining the achieved level of quality of the program and acquainting the students with the latest trends.

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KURS ZIMSKIH SPORTSKIH AKTIVNOSTI ZA BUDUĆE KINEZIOLOGE: TRENDОВI I IZAZOVI

Svrha ovog rada je da predstavi model kursa zimskih sportskih aktivnosti koji je organizovan za diplomirane studente kineziologije tokom perioda od 2010. do 2017. godine sa ciljem dobijanja dve glavne kompetencije: (i) metode i pristupi za unapređenje efikasne upotrebe slobodnog vremena za pojedince i grupe kroz aktivnosti na otvorenom u zimskom periodu i (ii) razumevanje sadržaja, svrhe i procesa zimskih sportskih aktivnosti na otvorenom. U istraživanju je učestvovalo ukupno 70 studenata kineziologije (26 muškaraca i 43 žene, starosti od 21.5±2.3 godine) (stopa odziva 26.5%, N=264). Studenti su inicijalno skijaško znanje klasifikovali kao: 16% početnici, 39% prosečni skijaši, 23% dobri skijaši i 22% vrlo dobri skijaši. Studenti su otkrili značajan napredak u svom skijaškom znanju (11% izvrstan napredak, 63% dobar/značajan napredak i 26% samo neznatan napredak). Međutim, studenti se nisu razlikovali u napretku u odnosu na svoje početno skijaško znanje ($\chi^2(9)=7.466$, $p<0,05$). 21% studenata je steklo kvalifikaciju instruktora skijanja na kraju programa. Skijaški napredak igra važnu ulogu u proceni zadovoljstva profesionalnim znanjem koje se može primeniti za budući rad kineziologa ($\chi^2(2)=7.245$; $p=0.027$) i performansama kursa sa aspekta korisnosti stečenog znanja koje se može primeniti na budući rad kineziologa ($\chi^2(2)=10.289$; $p=0.006$). Rezultati otvaraju nove mogućnosti za dalja poboljšanja zimskog kampa i njegovih aktivnosti. Zbog promene zakona u području sporta u 2017. godini očekuju se nova organizacijska prilagodavanja.

Ključne reči: alpsko skijanje, edukacija, organizavija, sport, kompeticije