Interindividual variability of the teaching-learning needs of student-athletes. A focus on ICT approaches

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Introduction

- As sports careers are characterized by a high level of uncertainty, getting a graduation represents a real necessity for most of the athletes.
- Although the interest of this dual project has been demonstrated (Capranica & Guidotti, 2016), the conciliation of an academic and an athletic career poses some difficulties (Breithecker, 2018; Gomez, Bradley & Conway, 2018).
- Higher education institutions implement teaching-learning supports to help student-athletes.
- Among the resources that are proposed, **information and communication technologies (ICT)** represent a promising approach (Semiz, 2018). Nevertheless, literature is poor about that topic.

Purpose

- This study aimed to analyse the student-athletes' opinions concerning the use of ICT in order to determine if there are differences between them according to some of their characteristics.

Methods

- Data were collected in two steps with student-athletes of the University of Liege (Belgium) following a **mixt methodology**:
  - (1) A **qualitative analysis** in 2017-2018: 9 of these students participated to a semi-structured interview.
  - (2) A **quantitative analysis** in 2018-2019 (frequency, average, standard deviation and correlation analysis): 30/66 agreed to answer to an online questionnaire, built on the data collected during the previous step.

Results (focus on the quantitative analysis' results)

Averages, standard deviations and frequences

- The expectation of using ICT devices in order to meet the needs of the majority of this specific group appeared in both parts of the study.

Titles	Average (X̄)	SD (σ)
1. Provision of course materials on a learning management system (LMS)	3,72	0,54
2. Implementation of a generalized podcast system for all my courses to listen / review courses	3,56	0,58
3. Provision of a relay student assigned, following the same curriculum as me, allowing me to put me in order and to provide me with essential information	3,2	1
4. Arrangements for teaching activities (examples: laboratory, seminar, date of submission of work, etc.)	3	0,82
5. Arrangements of schedule / schedule and terms and conditions for assessments and reviews	3	0,58
6. Implementation of remedies organized by the teacher during the school year, during which I could ask my specific questions	2,92	0,86
7. Establishment of a distance learning device using self-learning and whose course objectives would be defined, targeted and planned by the teacher	2,76	0,83
8. Implementation of a hybrid training system alternating self-learning and face-to-face courses	2,72	0,84
9. Establishment of "student tables" where you would be able to exchange with other students of the amphitheater in order to get an explanation of the missed classes and put you back in order	2,56	0,87
10. Particular follow-up of the service "Guidance studies" to help me on my method of work and my time management	2,56	0,96
11. School activities scheduled during summer vacation periods to make up for any accumulated delays	2,52	0,82
12. Set up courses during the summer / winter holidays to catch up on missed classes during the school year	2,28	0,79

- The students mentioned various advantages related to the use of ICT in their training, in view of the difficulties encountered…

Parallel with the main difficulty …	Benefits of ICT	No. of SA
Organization / time management	Save time (trips, fewer trips + more time on site during competitions, internships, training sessions)	7
	Greater flexibility in my time management (// courses only in class, study, prepare, "attend" courses according to their "desires" and be able to be present at their training)	7
	To be able to study during trips, internships	2
Restoration in order following the absences to the courses (sports courses, competitions …)	Autonomy, ease in reordering and ease of understanding : not / less depend on other students to get back in order (or having to go to find the teacher after each absence due to internships, etc.)	6
	Completeness and reliability of information, course content, resources (information provided by other students is not necessarily, always reliable)	5
	Listen again / review classes in case of absence	3
	Easy access to resources	2
	Possible rehearsals of practical work	1
	Ability to ask questions online, possibly on a forum	1
Other	Lesser feeling of "exclusion" from the student athletes compared to the "classic students"	1

- …but also disadvantages.

Parallel with the main difficulty …	Disadvantages of ICT	No. of SA
	Nothing	6
Organization / time management	Technical problems (with connection, podcast that does not work…)	3
	Loss of time (to listen the lessons)	1
	Problem with using digital tools	1
Restoration in order following the absences to the courses (sports courses, competitions …)	Non-exhaustiveness of the course material; less detailed or different explanations that may lead to problems of misunderstanding	5
	Inability to ask questions directly to the teacher	3
	Less good training on the ground	1
Other	Less contact with other students, fewer collaborations, loss of socialization, isolation	5
	Course more theoretical than face-to-face	1

Correlation analysis

- Nonetheless, a certain heterogeneity of opinions and expectations was identified. The student-athletes who have the highest expectations about ICT were generally the ones who …

  - … report more difficulties in reconciling their dual career (.22 ≥ r ≤ .51, depending on the variables taken into consideration).

Expectations (variables)	R
1. Establishment of a generalized podcast system for all my courses to listen / review courses	0,51
2. Waiting to be trained remotely (totally or partially)	0,47
3. Provision of a relay student assigned, following the same course as me, allowing me to put me in order and to provide me with the necessary information	0,37
4. "Meetings", round tables organized between us to share our experiences and help each other (tips and tricks).	0,36
5. Establishment of a distance learning device using self-learning and whose course objectives would be defined, targeted and planned by the teacher	0,29
6. Possible reduction of the year of study	0,29
7. Implementation of remedies organized by the teacher during the school year, during which I could ask my specific questions	0,26
8. Provision of course materials (syllabus, slideshows, …) on a platform accessible on the web (examples: e-campus, myULiège, etc.)	0,25
9. School activities scheduled during summer vacation periods to make up for any accumulated delays	0,24
10. Waiting for a totally remote training system	0,22

  - … have also a higher number of weekly training sessions (.39 ≥ r ≤ .52).

Expectations (variables)	R
1. Provision of course materials (syllabus, slideshows, …) on a platform accessible on the web (examples: e-campus, myULiège, etc.)	0,52
2. Establishment of a distance learning device using self-learning and whose course objectives would be defined, targeted and planned by the teacher	0,41
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8. Establishment of "student tables" where you would be able to exchange with other students in your amphitheater in order to get an explanation of the missed classes and get you back in order	0,32
9. Establishment of a generalized podcast system for all my courses to listen / review courses	0,31
10. "Meetings", round tables organized between us to share our experiences and help each other (tips and tricks)	0,30
11. Particular follow-up of the service "Guidance studies" to help me on my method of work and my time management	0,29
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14. School activities scheduled during summer vacation periods to make up for any accumulated delays	0,21

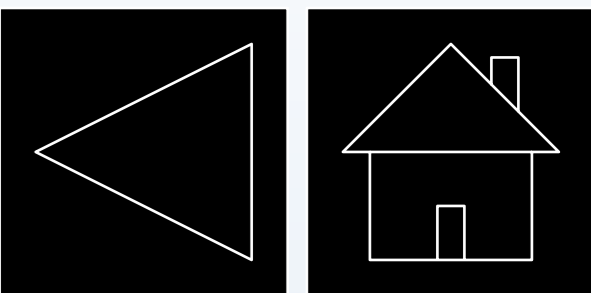 - … and a higher rate of absenteeism due to participation in trainings/competitions (.25 ≥ r ≤ .56).

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Conclusions

- The interindividual variability of the student-athletes' expectations in terms of ICT underlines that an even more personalized follow-up should be implemented for them in higher education.
- There is a need to cross these data with quantitative and qualitative data from **teachers** concerned in order to supplement the results currently available.

References

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- Capranica L., & Guidotti, F. (2016). *Research for CULT committee - Qualifications/dual careers in sports*. European Union. Structural and Cohesion Policies.
- Gomez, J., Bradley, J., & Conway P. F. (2018). The challenges of a high-performance student athlete. *Irish Educational Studies, 37*(3), 329-349, doi: 10.1080/03323315.2018.1484299
- Semiz, K. (2018). Does Sports and School Run Together? A Needs Analysis of University Student-Athletes. *Journal of Physical Education and Sports Studies, 10*(2). doi: ttps://doi.org/10.30655/besad.2018.10
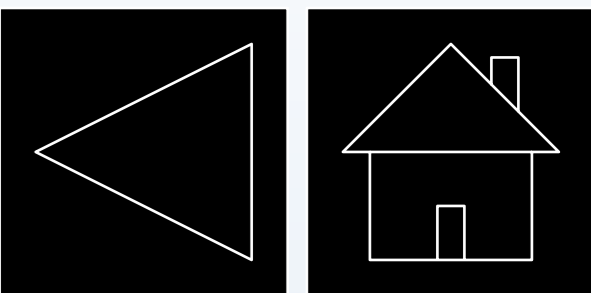
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Expectations regarding their difficulties

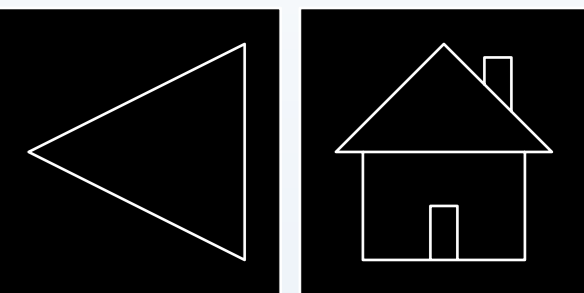|	Titles	Average (X)	SD (σ)
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Benefits of using ICT in their training, according to them

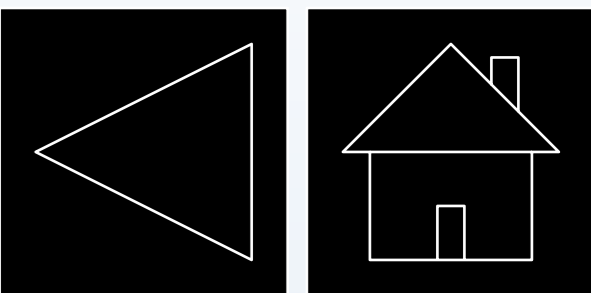| Parallel with the main difficulty ...	Benefits of ICT	No. of SA
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Disadvantages of the use of ICT in their training, according to them

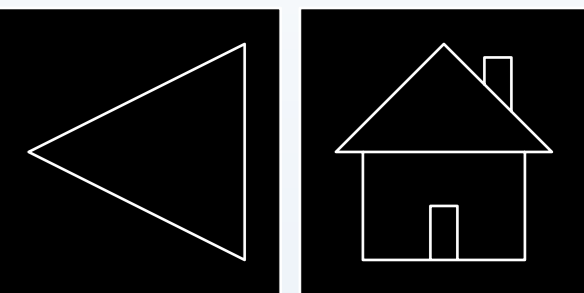| Parallel with the main difficulty …	Disadvantages of ICT	No. of SA
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<u>Difficulties to reconcile sport / studies</u>

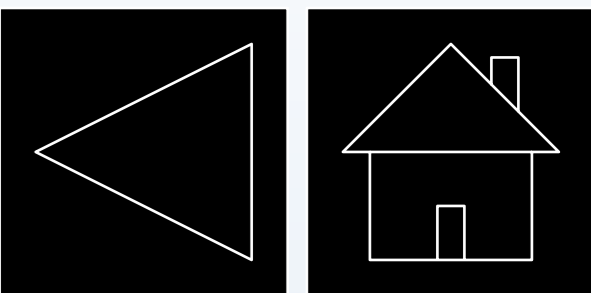|	Expectations (variables)	R
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Number of training sessions per week

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Internship days during school period (absence from classes)

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