



**PhD ICT KES**

Co-founded by the Erasmus+

**Project No. 609990**

**Project Acronym: DI-PHDICTKES**

**Project title:**

The development and implementation of PhD Curricula in ICT for  
Kosovo Education System

**Deliverable 1.2**

Analysis of existing PhD programmes in Europe

**Programme:** Erasmus KA 1

**Start date:** 15.11.2019

**Duration:** 36 months

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# 1. Introduction

Despite ever accelerating workplace changes, including rapidly expanding technology access and tools and fast improving information and communication systems, the education system in Kosovo is not yet fully developed to provide high quality research education. To increase the academic level and quality of the education system, continual investments are required; yet as a small country with a relatively small national budget, Kosovo has experienced constraints on the needed investments to drastically transform the quality of the education system [1]. In this situation, the system of university education in Kosovo is experiencing obstacles in terms of lack of focused research collaboration and output, which arise due to the lack of programs, mainly those of the PhD level in ICT [2]. The absence of such a graduate program contributes to the inability of creating the national human intellectual capacity and technological infrastructure required to become a country that fully integrates the ideas of digital age and knowledge society [3].

The DI-PHDICTKES project supports the initiative to develop and establish a common national PhD Program for ICT in Kosovo. The partners involved will contribute through co-design, transferring and contextualizing the 'know-how' expertise of novel PhD models to curricula customized to the unique situation and circumstances of the state of Kosovo. In this way, DI-PHDICTKES will design and implement a high-quality national program, adjusted to the needs of the Kosovo education system and delivered within a higher education infrastructure for the new generation of university students.

The general aim of this project is to create a national curriculum for the PhD Program in ICT, with the involvement of three Universities in Kosovo and the Programme Country institutions that have demonstrated long time experience in similar programs. At the first stage, the project will analyze and map existing PhD programs in ICT in Europe. It will create activities through professional development workshops and training to increase the research qualifications of local professors. Finally, it will facilitate the process of establishing the national PhD program for the partner institutions, including all the required documentation and human capacities stated as prerequisites from the Accreditation Agency of Kosovo. In order to have a successful implementation of the new national curricula, research and collaboration will be achieved via virtual means in conjunction with experts from LNU, NTNU and SEERC. During the overall scope of the project, the crucial infrastructure will be established in parallel to workshops, study visits and training, which will be offered in order to increase research abilities, including co-supervision and co-mentoring capabilities.

This deliverable sets the foundation on which the rest of the project will *rely*, by providing valuable insight regarding current successful PhD programs in the ICT domain, established in a variety of European countries. Through the following sections, the associated practices in PhD education and research will be outlined and analysed, while identifying the best approaches and discussing their applicability for the region of Kosovo. A summary of the key proposals is presented in the end, which will feed the rest of the work packages in the project, dealing with concrete decisions regarding the PhD Program establishment and implementation in Kosovo.

## 2. Survey and data collection

The objective of the conducted survey associated with this deliverable, was to capture the most conventional practices involved in Higher Education institutions, mainly in PhD programs and research centers in the ICT domain. For this purpose, an extensive questionnaire was developed, consisting of 80 questions, both multiple choice and open-ended. The devised questionnaire is divided into 15 sections, each pertaining to a specific aspect of the PhD program, allowing us to group the answers and interpret them in a comprehensive way. The sections cover information regarding the general programme details, the entry to the PhD programme, regulations and supervision, required courses, ethics in PhD research, progress and quality assurance, external inputs, requirements for successful graduation, administration, fees, scholarships, the relations with research centers and finally the general applicability of the answers in each institution's country.

The questionnaire was distributed electronically through an online google-form, receiving input from a total of 11 European countries. As displayed in Fig. 1, the involved countries were Austria, France, Germany, Greece, Kosovo, North Macedonia, Norway, Romania, Serbia, Sweden and UK. This enabled us to get a spherical view of the approaches followed in a variety of different situations aiming to capture inputs from well-established PhD programs in the ICT domain.

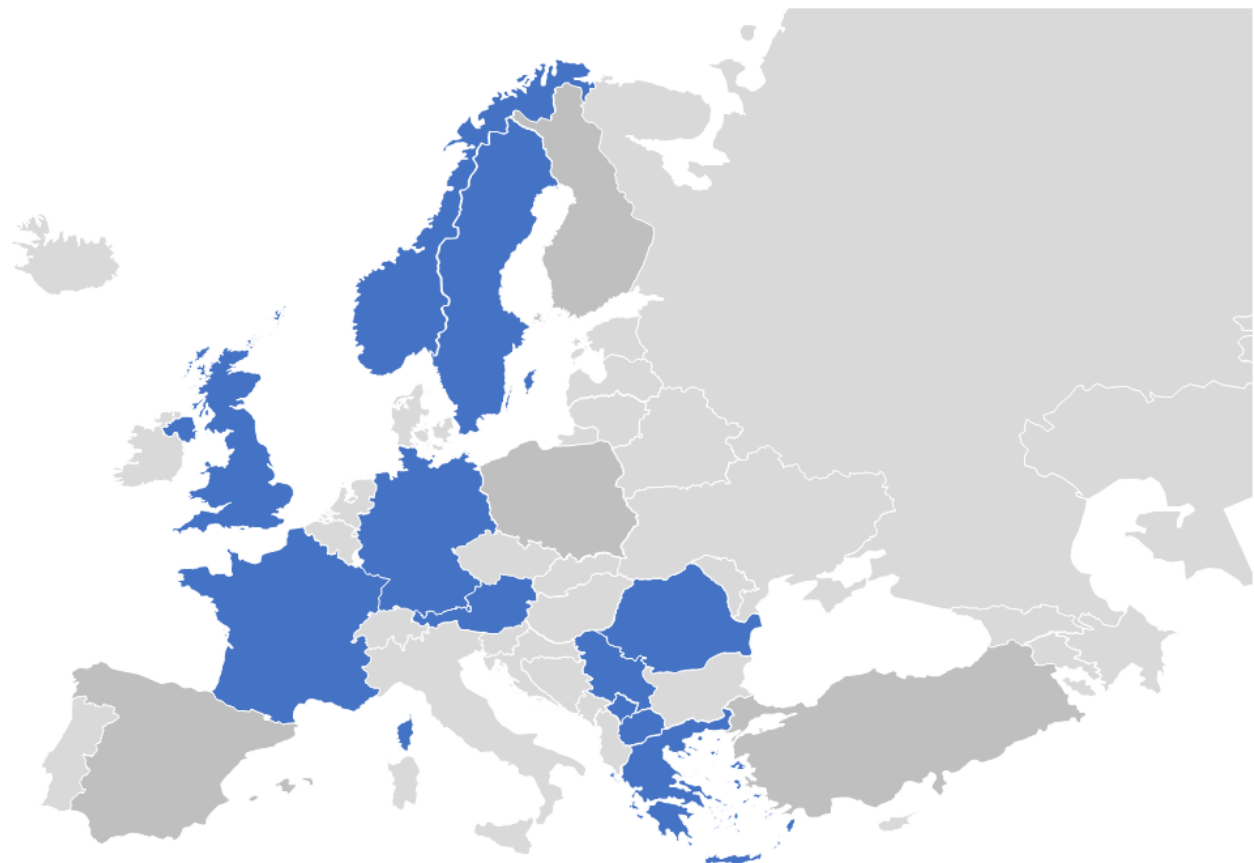


Figure 1: The involved PhD program countries in the conducted survey.

In the answers provided, we included pre-set answers as well as the answer “Other”. This is to justify that there might be an answer which appears in the figures which may seem odd as a pre-set case.

The participants who took part in the survey have either finished their PhD studies, or are currently working in the the following Institutions:

- Linnaeus University, Sweden
- NTNU, Norway
- The University of Sheffield, UK
- University of Bonn, Germany
- Laboratory of Signals and Systems (L2S), Paris-Sud University & CentraleSupélec, France
- University of Macedonia, Greece
- Technische Universität Wien, Austria
- TU Wien (Vienna University of Technology), Austria
- UBT-Higher Education Institution, Kosovo
- University of Bucharest, Romania
- SEE-University, North Macedonia
- Belgrade University, Serbia

## 3. Findings

This section presents the findings of the conducted survey, categorized into six main subsections: general information, entry and graduation criteria, supervision process, taught part and ethics approval, progress and quality assurance, and finally general applicability and research centers. For each question there is a dedicated table describing the rationale of the question, the findings from the survey, and what proposals and issues it gives rise to with respect to the project.

### 3.1 General information

#### 3.1.1 PhD Programme details

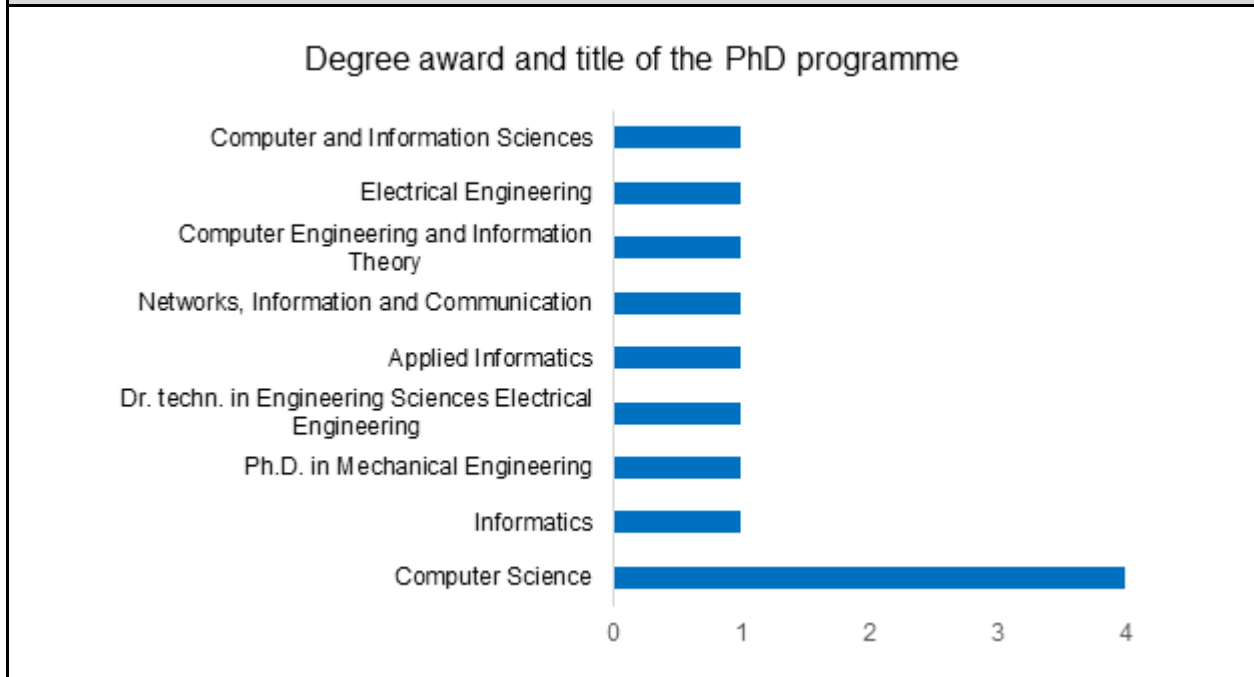
This subsection covers the following topics:

- What is the degree award and title of your PhD programme?
- Is the research area/topic recorded in the official PhD title?
- Which types of PhDs formally exist?
- Are there ECTS credits associated with the PhD programme as a whole?
- If yes, how many ECTS in total?
- Mode of study
- Duration of Full-Time study (min-max)
- Duration of Part-Time study (min-max)

**Rationale:**

The question aims to investigate the title of the award of a PhD in different countries. This has to do with the way the term of specific subdomain of ICT is interpreted in each country. It would be, however, interesting to see whether except from the main trends, i.e. Computer Science and Informatics, there are other more specialised titles that reflect the nature of the research conducted within a ICT related doctoral programme.

**Findings:**



**Dominant Answer(s) and free text notes made by participants:**

The majority of the answers contain Computer Science and Informatics while the rest seem to be more specialised.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether the title of the award will be PhD in Computer Science / PhD in Informatics or more specialised.

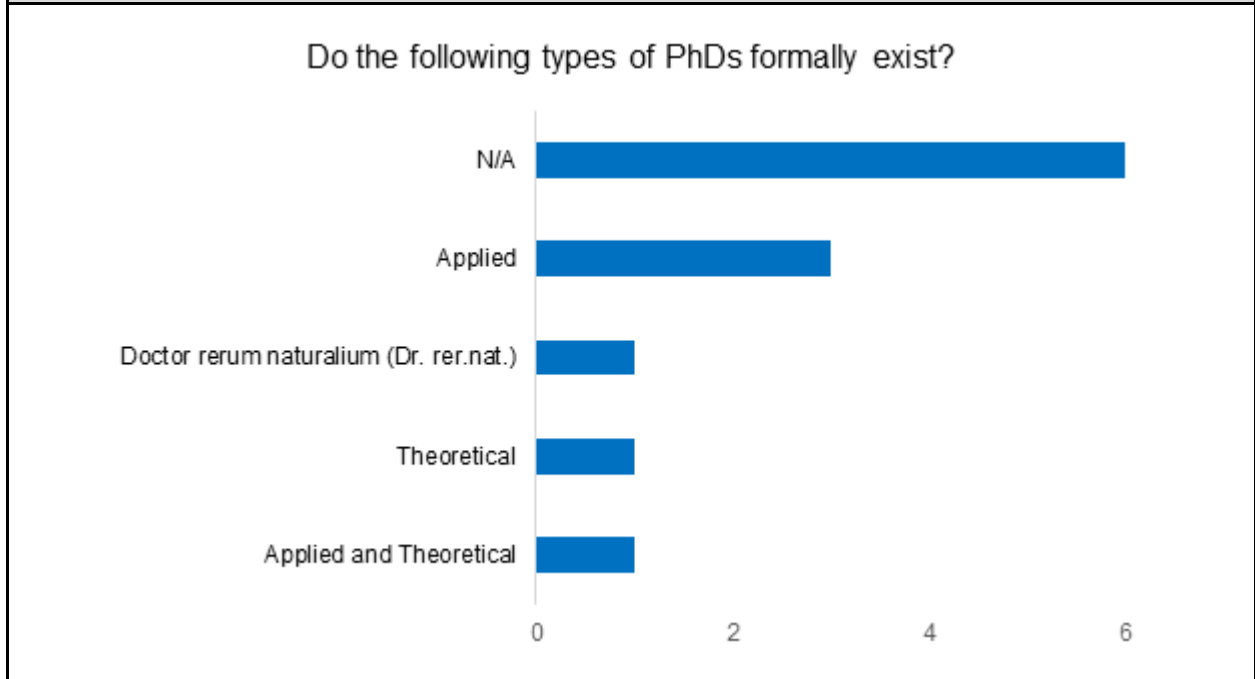
**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

There is no restriction from the KAA body, however all HEI partners are encouraged to aim for the specific titles that are related to their PhD focus/profiles.

**Rationale:**

There has been a lot of discussion whether a PhD should be theoretical or applied. It is widely accepted that research should lead into new developments and advances in theory but also to results that have practical impact and applied fairly quickly in the industry and society. This question investigates whether this is formally established within institutional regulations.

**Findings:**



**Dominant Answer(s) and free text notes made by participants:**

It seems that there is no formal distinction between the two or if there is both types are accommodated. .

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether there will be formal categorization of theoretical.applied PhD or no categorization at all (at least formally).

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

KAA is drafting the regulation for research-oriented PhD programs.

**Rationale:**

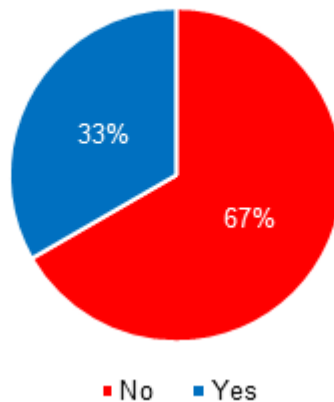
There are institutions that record the topic of the research that a PhD candidate has



conducted in the actual official certificate of the degree, e.g. PhD in Informatics (Machine Learning) while others do not. In the latter case, there is no indication of the topic researched but this may appear on a different document. Sometimes the lack of the topic in the official award is due to the fact that it cannot be uniquely identified or defined within a single research area. It is aimed to investigate to what extent this appears in European Universities. .

**Findings:**

Is the research area/topic recorded in the official PhD title?



**Dominant Answer(s) and free text notes made by participants:**

In the majority of the institutions, the topic of the research is not mentioned in the PhD award.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether the award will include specialization, i.e. the area of research, or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

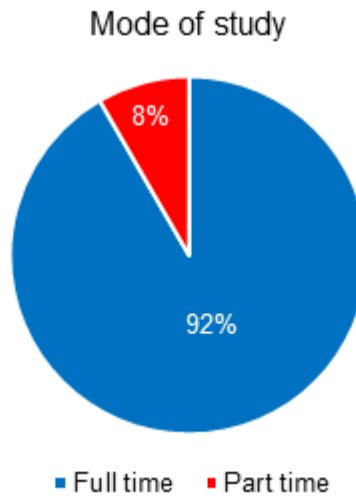
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**Rationale:**

PhD candidates are registered in Universities as full-time or part-time. This registration status normally implies two things: (a) whether continuous presence is required in the institutions (thus not allowing any other type of “employment”) and (b) the duration of studies. In most

countries Part Time studies mean half the time invested by a PhD candidate than Full Time studies. In some institutions who charge fees, this has also some implication in the amount of fees paid annually or in total. A similar impact may be found in scholarships which appear to be less in number for Part Time students.

**Findings:**



**Dominant Answer(s) and free text notes made by participants:**

Full time seems to be the status of all PhD students admitted in the vast majority of answers.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether both Full time and Part time students will be admitted and what is the difference between the two.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

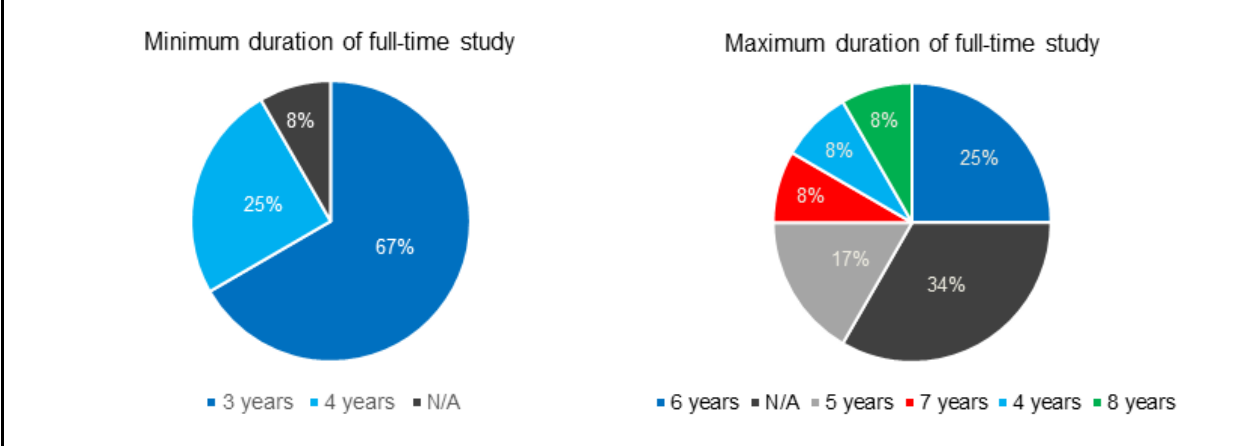
Both full-time and part-time doctoral candidates must have a clearly defined time for completion. Doctoral programmes must have a time limit of 3 or 4 years for full-time doctoral students.

**Rationale:**

The minimum and maximum duration of study refers to the period within which a PhD full time candidate is obliged to complete the doctoral studies. Research leading to a PhD award is a mid to long term process and it is widely acceptable that innovative results cannot be obtained before a period of time is elapsed. On the other hand, the period of research should be limited

to a maximum since it is demonstrated that research (especially in this field) may become obsolete if a number of years have passed. The question investigates the different approaches taken by different Universities.

**Findings:**



**Dominant Answer(s) and free text notes made by participants:**

All agree that the minimum duration of studies is less than 4 years (3 is the majority). With regards to maximum durations answers vary a lot. Interesting to notice that 1/3 does not consider the maximum period.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider what is the minimum and maximum period of study (duration) for either Full time or Part time students.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Both full-time and part-time doctoral candidates must have a clearly defined time for completion. Doctoral programmes must have a time limit of 3 or 4 years for full-time doctoral students.

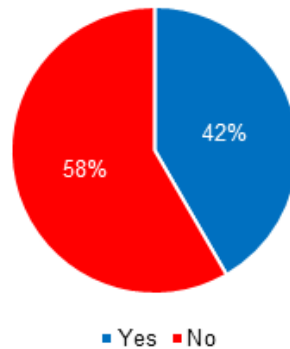
**Rationale:**

European Credit Transfer System (ECTS) normally applies to taught programmes as expressed in European directives. Since PhD awards are mainly based on the quality and outcome of research, it is not clear whether there should be ECTS credits associated with it and if so, how many. In some countries PhD programmes may include a taught component (obligatory usually during the initial stage) with courses and ECTS credits to them. In others, there is a taught part (obligatory or optional) but no credits are associated with it. Here, we

investigate whether ECTS are attached to the whole programme.

**Findings:**

Are there ECTS credits associated with the PhD programme as a whole?



**Dominant Answer(s) and free text notes made by participants:**

This is split over programmes that bear ECTS and programmes that do not.

**Clarifications/Notes by participants (separate bullets for separate answers):**

- 240 credits of which 90 credits is courses and 150 credits is thesis work

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether the PhD programme will bear any ECTS and how many.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

180 ECTS for three year PhD program (each year 60 ECTS)

The programme should enable individual research opportunities; courses should not exceed 1/5 of ECTS (36 credits) of total credit hours or 20% of the total workload; programme must develop transferable skills, sufficient training in the methodology, ethics and integrity of research.

### 3.1.2 PhD Regulations

This subsection covers the following topics:

- Do PhD candidates have the right for an extension after the minimum period of study?
- Can PhD candidates take a period off their studies (Leave of Absence)?
- Can full-time PhD candidates work while pursuing a PhD?
- Does your institution provide a separate section on PhD regulations?
- Does your institution provide a Handbook for PhD candidates?

<b>Rationale:</b>														
During their studies, PhD candidates may require an extension or a leave of absence, as it happens with undergraduate and postgraduate studies. This question tries to verify whether this is also a common regulatory practice in institutions.														
<b>Findings:</b>														
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Do PhD students have the right for an extension after the minimum period of study?</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>83%</td> </tr> <tr> <td>No</td> <td>9%</td> </tr> <tr> <td>N/A</td> <td>8%</td> </tr> </tbody> </table> </div> <div style="text-align: center;"> <p>Can PhD candidates take a period off their studies (leave of absence)?</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>92%</td> </tr> <tr> <td>N/A</td> <td>8%</td> </tr> </tbody> </table> </div> </div>	Response	Percentage	Yes	83%	No	9%	N/A	8%	Response	Percentage	Yes	92%	N/A	8%
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<b>Dominant Answer(s) and free text notes made by participants:</b>														
The majority of the institutions have in place procedures to extend the minimum period of study as well as to give a leave of absence to students with extenuating circumstances.														
<b>Proposal for Issue to be discussed for the DI-PHDICTKES project:</b>														
To consider whether there will be procedures for extending the period of study and leave of absence due to extenuating circumstances.														
<b>Issues and/or Restrictions related to Standards for PhD Programmes by KAA:</b>														
Not specified.														

<b>Rationale:</b>
Pursuing a PhD normally requires focus on the research topic and thus any distraction from other activities may be crucial to the timely progress. Usually, one such activity is work undertaken in parallel to studying. Some institutions do not allow PhD candidates who are registered as full time to work, while some other may allow some kind of extra employment. This question aims to investigate to what extent this is formally allowed.
<b>Findings:</b>

### Can full-time PhD candidates work while pursuing a PhD?



#### Dominant Answer(s) and free text notes made by participants:

It is surprising to note that almost half of institutions allow full time PhD students to work anywhere. The rest allow candidates to work for the institution, assigning teaching duties or giving them a research contact etc.

#### Clarifications/Notes by participants (separate bullets for separate answers):

- The PhD student can work part time at the university or funding organisation but is not allowed to work more than 50 % - then the PhD studies become 50%.
- Normally shall a minimum of 80% of the working hours for one year be allocated to full-time studies

#### Proposal for Issue to be discussed for the DI-PHDICTKES project:

To consider whether Full Time candidates will be allowed to work elsewhere or they will exclusively conduct research for their PhD.

#### Issues and/or Restrictions related to Standards for PhD Programmes by KAA:

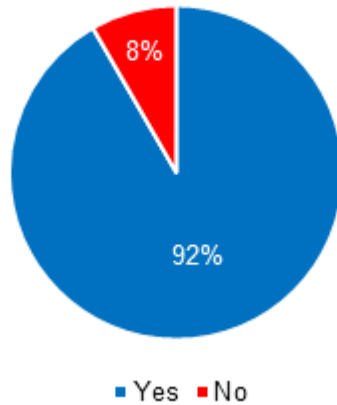
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#### Rationale:

PhD studies primary focus is on research. However, as any other programme at lower level, PhD studies should be regulated by the University in terms or admission, supervision, process, outcome, graduation etc. It is aimed to verify whether this stands for the institutions who participated in this survey.

**Findings:**

Does your institution provide a separate section on Regulations on PhD studies?



**Dominant Answer(s) and free text notes made by participants:**

All institutions have Regulations for PhD programmes.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider what will be the Regulations of the PhD programme and how it will be integrated with the rest of the institution's regulations.

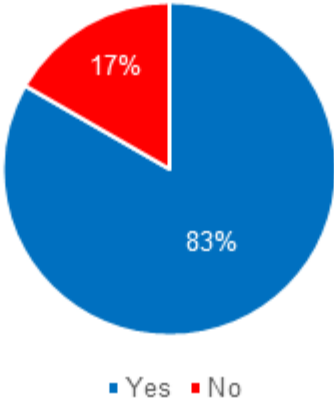
**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

According to the KAA PhD Draft, there should be separate Regulations.

**Rationale:**

Normally the formal University Regulations are hard to read and interpret. Some institutions develop a Handbook which explains everything about PhD studies using a simpler approach. This Handbook covers everything that the PhD candidate needs to know about their tasks, rights and obligations as well as rules and exceptions that are applied during the PhD programme. This question aims to verify that such Handbooks are issued by the institutions.

**Findings:**

<p>Does your institution provide a Handbook for PhD students?</p>  <p>■ Yes ■ No</p>
<b>Dominant Answer(s) and free text notes made by participants:</b>
The vast majority of institutions provide a Handbook for PhD candidates. Obviously the Handbooks will vary in contents but it will be interesting to have a look at some of these.
<b>Proposal for Issue to be discussed for the DI-PHDICTKES project:</b>
To consider whether a Handbook for studies will be developed for candidates or not.
<b>Issues and/or Restrictions related to Standards for PhD Programmes by KAA:</b>
According to the KAA PhD Draft, a Handbook should exist.

### 3.1.3 Administration and fees

This subsection covers the following topics:

- Is there a dedicated Academic responsible for the PhD programme?
- Is there a dedicated Administration support person for the PhD?
- Are there any fees charged?
- Does the institution offer fee waivers?
- If you offer a scholarship, what are the criteria for awarding them?
- If you offer scholarships, what do you expect PhD students to offer back?

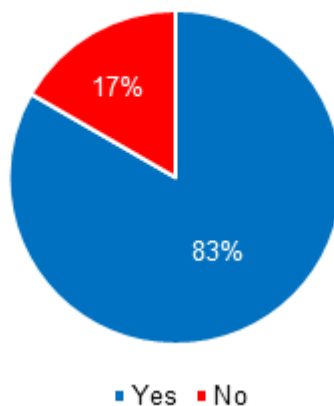


**Rationale:**

Administering academic issues related to a PhD programme is a challenging task. In some institutions, academic staff is appointed with this task (usually as academic directors), to oversee and monitor various issues related to student admissions, progression, graduation and other logistical issues. Normally, this is also accompanied by some compensation from other duties (e.g. less hours of teaching). This question aims to investigate whether appointing an academic responsible for a PhD programme is a common practice across the countries.

**Findings:**

Is there a dedicated Academic responsible for the PhD programme?

**Dominant Answer(s) and free text notes made by participants:**

Institutions assign a member of staff with the task to be responsible for the whole programme.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether an academic will be appointed in order to have responsibility for the whole programme or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

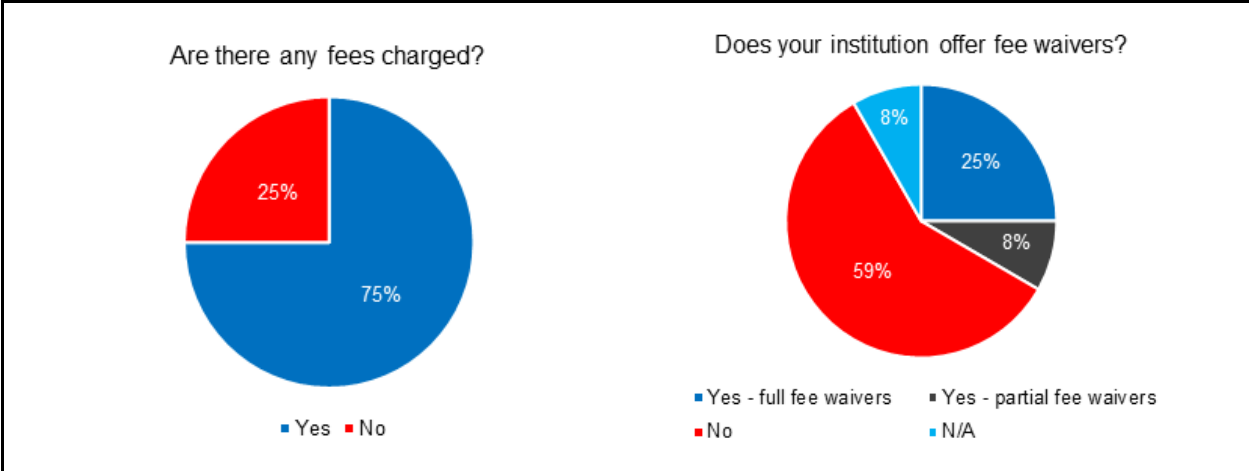
For each student group (defined by the statute of the institution) and for every 60 ECTS credits in the study program, the institution has employed at least one full time staff with PhD title or equivalent title in the case of artistic/applied science institutions.

Sufficient number of academic staff with a doctoral degree; at least 50% of courses at doctoral level has to be performed by the academic staff from the institution that is organizing the doctoral programme; at least 5 academic staff members have PhD in the research field of the doctoral programme; each member must have at least 3 papers published in international relevant publications in the last 5 years (relevance of publications is defined according to international criteria for the particular field of science).

**Rationale:**

Fees is a complex issue and varies a lot across different countries. There are public, non-for-profit or private institutions. Even so, some charge fees for different levels of studies, some do not. Also, some may have mechanisms for fee waivers and charge reduced fees to students as a means to apply social responsibility, address economical problems of financially weak families etc. This may be associated with scholarships or not. Irrespective of what policies exist for other levels of study, PhD programmes may have some requirements in terms of fees paid annually or as a whole to the institution. This question investigates to what extent this happens and whether fee waivers are applied.

**Findings:**



**Dominant Answer(s) and free text notes made by participants:**

Most institutions charge fees with the majority of them not having fee waivers. It would be interesting to investigate the amount of fees paid by PhD students in each case.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether there will be fees or not and if there are, whether they are going to be opportunities for fee waivers (associated with potential scholarships)

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

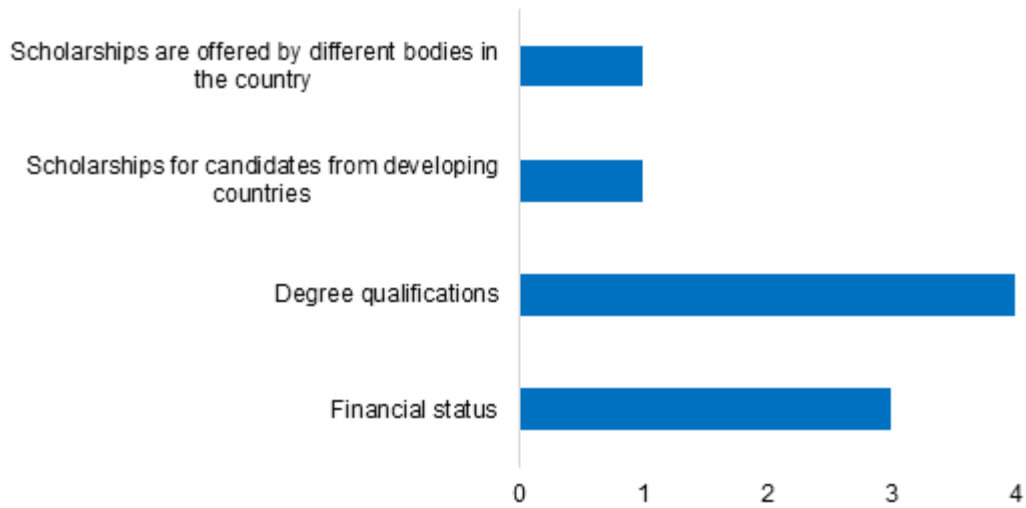
According to the KAA accreditation manual, the institution should include the tuition and administrative fees are made publicly available prior to application for admission (See Standard 9.2).

**Rationale:**

Awarding scholarships to PhD candidates either in the form of fee waiver or in the form of reciprocal tasks within the institution, is more common than in other levels of study. This question aims to investigate whether scholarships are given to candidates, and by whom.

**Findings:**

If you offer scholarships, what are the criteria for awarding them?



**Dominant Answer(s) and free text notes made by participants:**

The main criteria seem to be degree qualifications and financial status.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider what will be the explicit criteria for awarding scholarships, if they exist.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

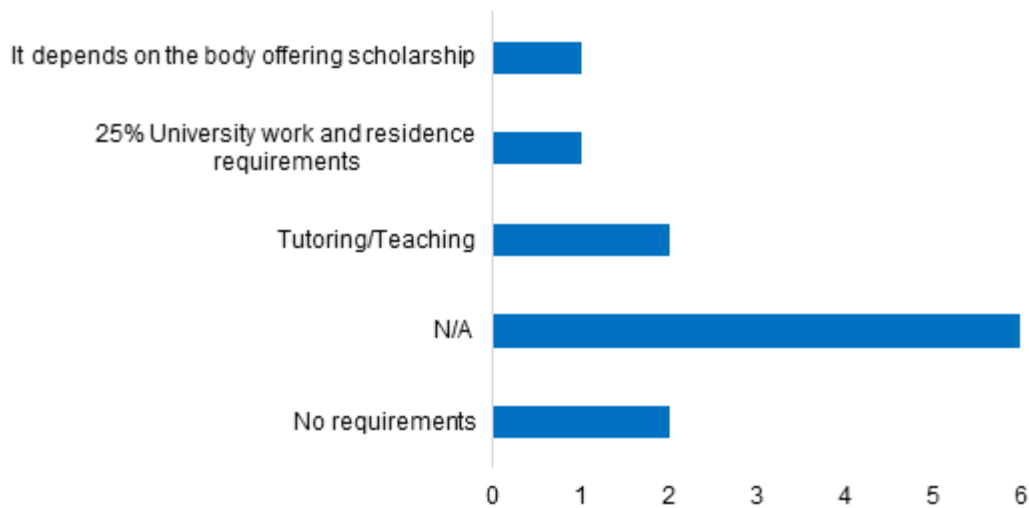
Not specified.

**Rationale:**

Awarding a scholarship is normally accompanied by some kind of reciprocal task within the institution (e.g. tutoring, technical support, other obligations within the institution etc.). Sometimes, there is nothing expected back from the candidates. This question aims to find out what each institution expects the candidate to do after awarding a scholarship.

**Findings:**

If you offer scholarships, what do you expect PhD students to offer back to the institution?



**Dominant Answer(s) and free text notes made by participants:**

The majority of the institutions do not expect anything back from the students.

**Clarifications/Notes by participants (separate bullets for separate answers):**

- Most scholarships are 4 year 75 PhD + 25 % work at University. Residence requirements (for all also without scholarship) : one year. Contribute to a good and relevant academic environment and academic development
- Not required!
- It depends which Institution has already awarded you the scholarship, since there are several scholarships.
- Not the case in my institution.
- Depending on the candidate, they might undertake some teaching or tutorials of undergraduate courses
- Tutoring and teaching

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether scholarships (if they exist) will be associated with reciprocal tasks for the institution or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Not specified.

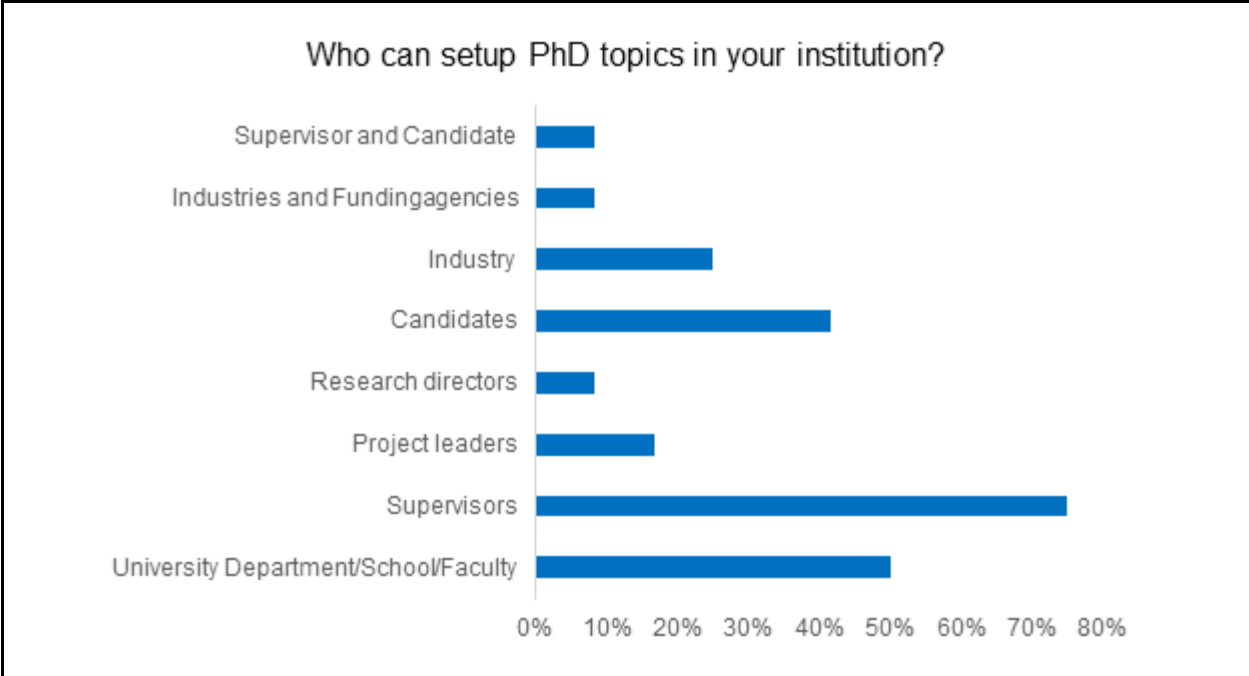
## 3.2 Entry and graduation criteria

### 3.2.1 Entry to the PhD Programme

This subsection covers the following topics:

- Who can set up PhD topics in your institution?
- What does the PhD application include?
- Who decides which applicants will be admitted?
- Is there an interview of the candidate before accepting her/his application?
- Which are the criteria for selecting a PhD candidate?
- What period during the year does your institution admit PhD candidates?

<b>Rationale:</b>
This question aims to investigate who is responsible to set up PhD topics in each institution. The way that a research topic is conceived, decided and disseminated varies. Institutions may use more than one way to accomplish this task and we aim to see the various approaches ranging from bottom-up (candidate initiated) to top-down (University/School initiated).
<b>Findings:</b>



**Dominant Answer(s) and free text notes made by participants:**

It is expected that the potential supervisor has the primary role in this. There is no dominant answer but it is useful to see different approaches taken by different institutions. It is noted that candidates have the right to propose their own topic for research.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider who would be the person or institutional body which will set up the advertised PhD topics.

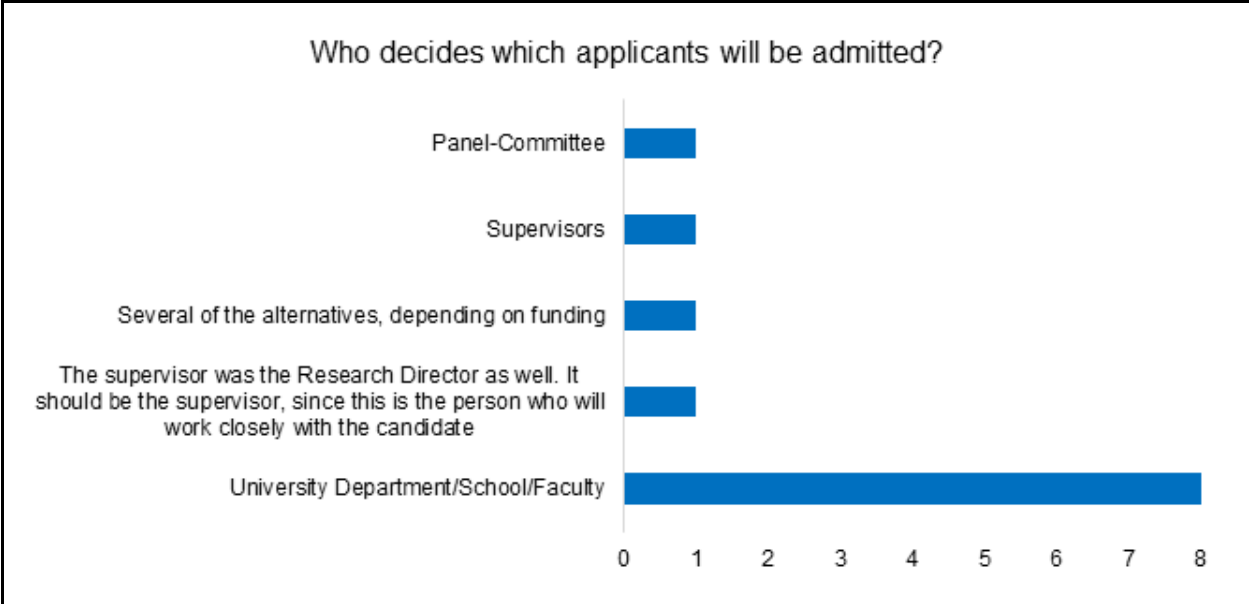
**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Not specified.

**Rationale:**

Once applications are received by an institution, a process for selecting and admitting the most appropriate candidate follows. The aim of this question is to find out who is formally involved in this process, whether it is a collective decision (e.g. committee, department) or an individual decision (e.g. supervisor) or both.

**Findings:**



**Dominant Answer(s) and free text notes made by participants:**

The majority of the institutions decide collectively through a central mechanism.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider who would be the person or institutional body which will decide who is going to be accepted for the PhD programme.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Not specified.

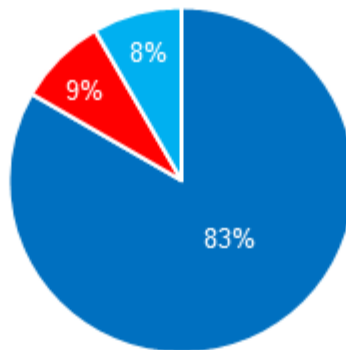
**Rationale:**

Following the formal submission of applications and their associated formal documentation, the institution may decide to admit a candidate after an interview takes place. The interview goal is to investigate the background, intentions, personality etc. of the candidate since pursuing a PhD is a long lasting process requiring existing skills, background and most of all commitment to research. We aim to verify that having an interview before a decision is taken is a common practice in the majority of the institutions.

**Findings:**



Is there an interview of the candidate before deciding to accept the application?



■ Yes ■ No ■ Usually prior to admission (e.g. with supervisor or employer)

**Dominant Answer(s) and free text notes made by participants:**

It seems that an interview is essential before a candidate is admitted. It is interesting to review further how this interview is conducted.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether an interview will be conducted before deciding about the acceptance of a candidate or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

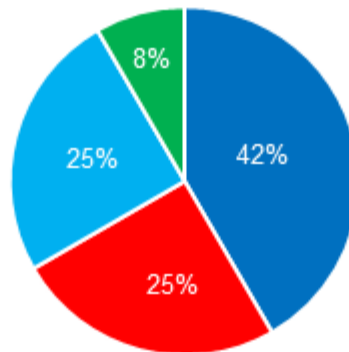
Not specified.

**Rationale:**

Normally there should not be time restrictions in which admission for PhD candidates is possible in the sense that there is no specific course of action concerning a group of students (as it happens with undergraduates or postgraduate studies), except perhaps if a taught part is mandatory or there is another regulatory issue that forbids admissions in periods other than the beginning of the academic year or semester. This question is asked in order to find out what is the case in various countries.

**Findings:**

What period during the year does your institution admit PhD candidates?



- Anytime
- Beginning of academic year
- Beginning of academic semester
- Anytime, preferably beginning of year

**Dominant Answer(s) and free text notes made by participants:**

Different approaches are followed but the majority admit candidates either at the beginning of the semester or at the beginning of the academic year. .

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider when it will be the most appropriate period to advertise PhD topics and admit students.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Not specified.

**Rationale:**

Selection of a PhD candidate is a challenging task for the group or the individuals who participate in this process. Sometimes there are explicit (advertised) and implicit criteria which are used to make an informed, fair and transparent decision. This question aims to verify that such criteria exist and pretty much applied uniformly in all institutions.

**Findings:**

### What are the criteria for selecting a PhD candidate?



#### Dominant Answer(s) and free text notes made by participants:

There is no dominant answer, but the answer indicates a range of criteria that are taken into account. In one case, an entry exam is mentioned.

#### Proposal for Issue to be discussed for the DI-PHDICTKES project:

To consider what will be the explicit criteria under which an applicant will be accepted in the programme.

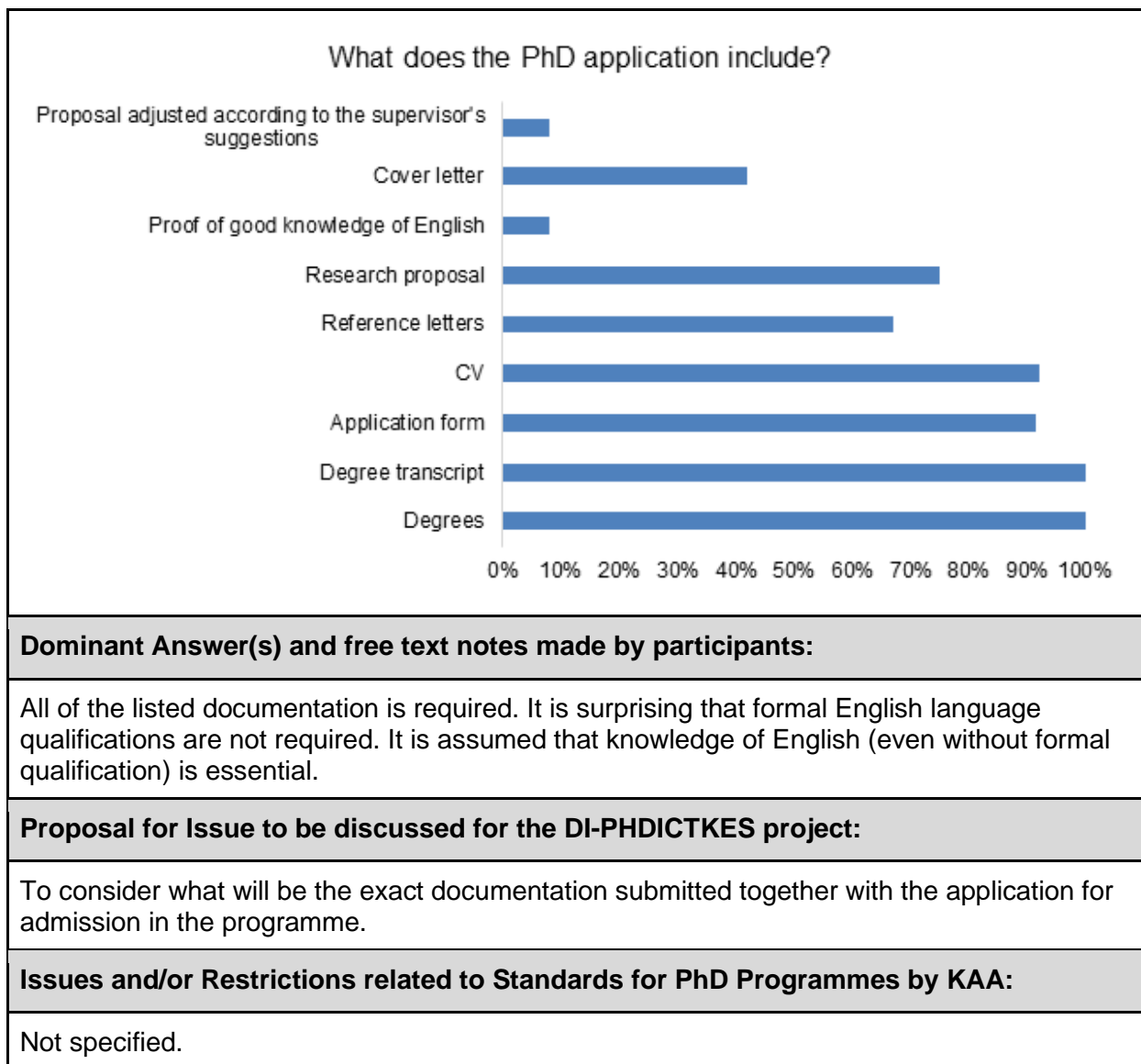
#### Issues and/or Restrictions related to Standards for PhD Programmes by KAA:

Doctoral candidates must be selected on the basis of a competitive and transparent process. Applicants for a doctoral programme must have an educational level equivalent to a masters degree.

#### Rationale:

This question aims to find out what the formal documentation of a PhD application includes. It also attempts to verify that such documentation is pretty much consistent across all institutions.

#### Findings:



### 3.2.2 Requirements for graduation

This subsection covers the following topics:

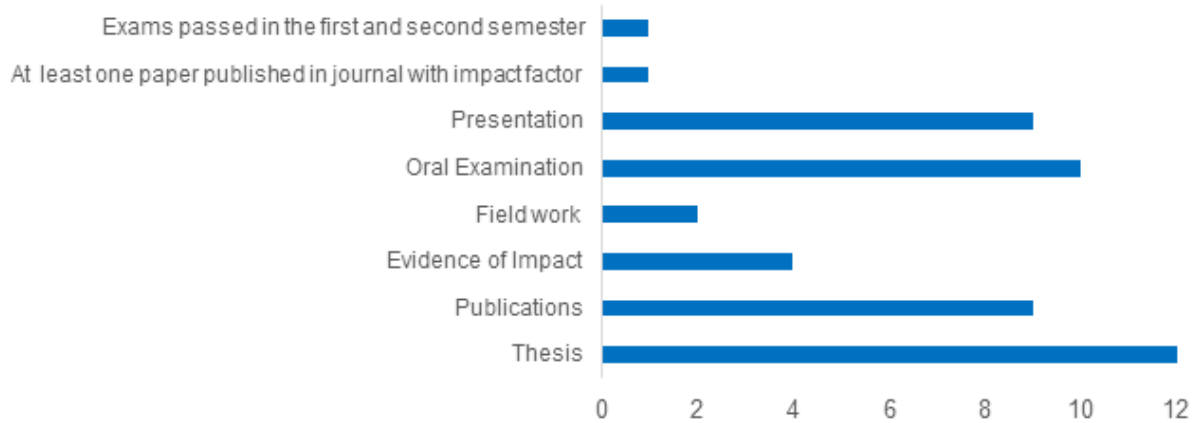
- Which of the following are mandatory for the completion of a PhD?
- Whom of the following assess the PhD work and finally agree on awarding the degree?

**Rationale:**

Completion of a PhD work and its subsequent award must meet a list of criteria, most of it associated with the quality of the research conducted. Apart from the written submitted thesis, there might be other KPIs that are taken into account when the final judgment on whether to award a PhD is made. This question is to investigate what are the KPIs used in various institutions.

**Findings:**

Which of the following are mandatory for the completion of a PhD?



**Dominant Answer(s) and free text notes made by participants:**

Answers were as expected. Except the submission of thesis (specifications need to be further investigated) a number of other criteria as essentials such as publications, oral examination (viva), impact etc. It would be interesting to review whether these can be quantified.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider what will be the explicit criteria (including KPIs if necessary) to award a PhD after the submission of a thesis. Thesis specification should be also agreed.

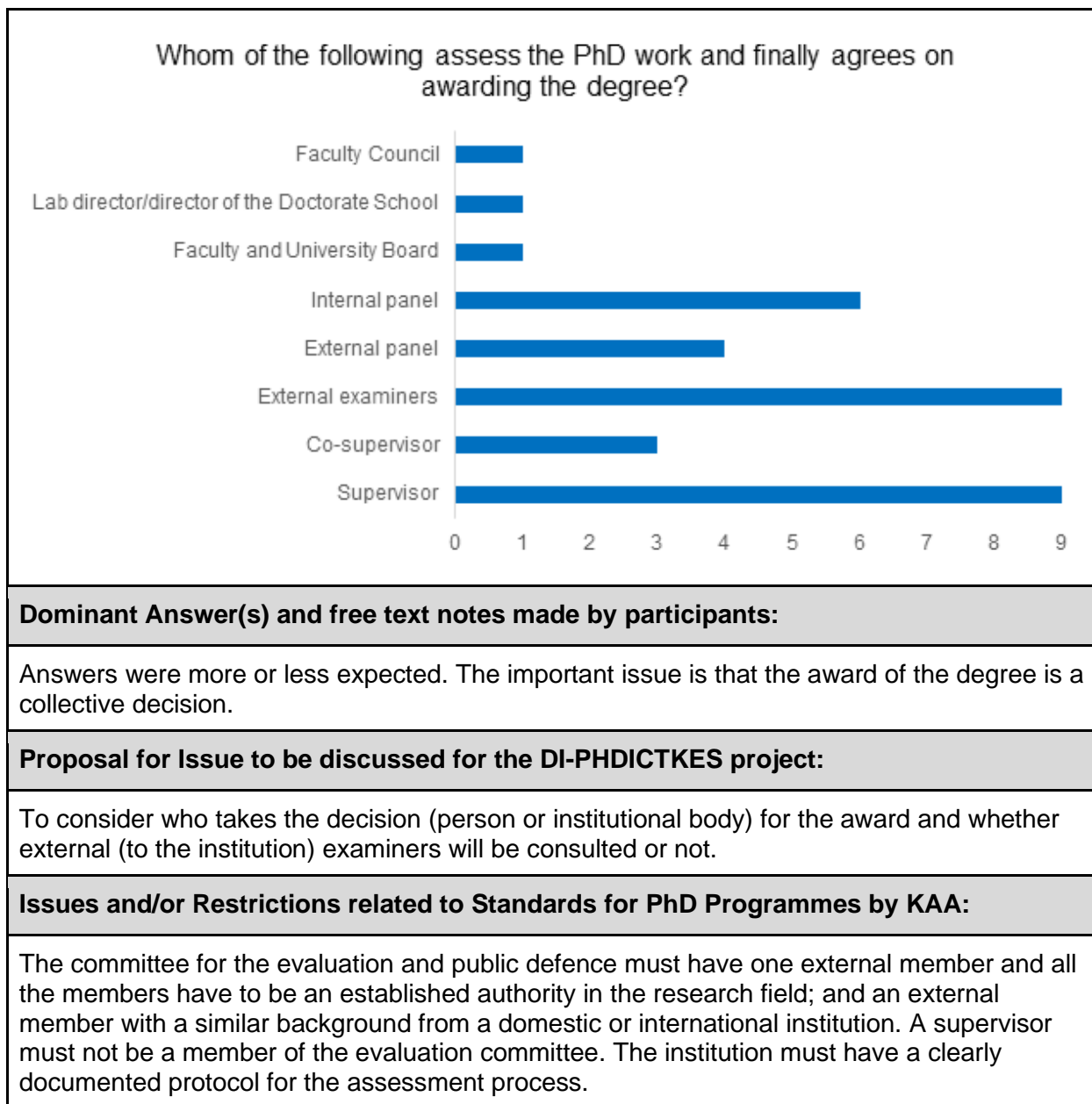
**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Doctoral candidates are supported and there is a requirement to publish at least 1 paper as a first or corresponding author in a peer-reviewed journal relevant to the field (indexed in WoS and/or Scopus). Candidates must submit their thesis to the doctoral committee within the stipulated time scale and participate in an oral public defence. The final outcome of the doctoral programme is a thesis that could have different formats (such as classical monograph, so called Scandinavian model of thesis) and the copy needs to be publicly available (national/institutional on-line systems, and a hard copy in the library (institutional and/or national)).

**Rationale:**

After the completion of the research and the submission of the thesis, the decision for awarding a PhD is taken by a number of individuals who in the form of a committee or panel verify whether the criteria are met. These committees may include or not the supervisor, only internal to the institution members of staff or external academics etc. We would like to see the variety of approaches by different institutions.

**Findings:**



### 3.3 Supervision

This subsection covers the following topics:

- How many supervisors are formally assigned to the PhD student?
- Who assigns the supervisors to the PhD candidate?
- What are the qualifications of a member of faculty to become a supervisor of a PhD student?
- Is there a prerequisite on Academic Position to supervise a PhD?
- Do faculty members pass through training before they supervise PhD students?

- Do faculty members have a mentor while they supervise their first PhD student?
- Is co-supervision formally established in your institution?
- If co-supervision is possible, who can be a co-supervisor?
- Is there a handbook for supervisors?
- Is the PhD programme supported by any VLE/Collaborative environment?
- How does your institution cost the supervision process?
- Is there a provision for change of supervisors?
- Is there a limit on the number of PhD students a member of staff can supervise?

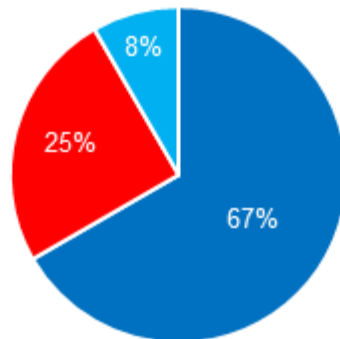
**Rationale:**

Supervision of a PhD candidate may be assigned to one person or more, depending on what the institution believes that it is best for the candidate and the research to be conducted. There might be various approaches to this, either obligatory or optional depending on each candidate case and the topic of research. Sometimes, this is also an internal quality assurance mechanism that has to do with increasing opportunities for quality research as well as contingency plans in case supervision changes or fails.

**Findings:**



How many supervisors are formally assigned to the PhD student?



■ One ■ Two ■ One main supervisor, one or two co-supervisors

**Dominant Answer(s) and free text notes made by participants:**

One supervisor is the norm. There are few institutions which appoint two supervisors.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider how many supervisors will be assigned to each PhD candidate.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

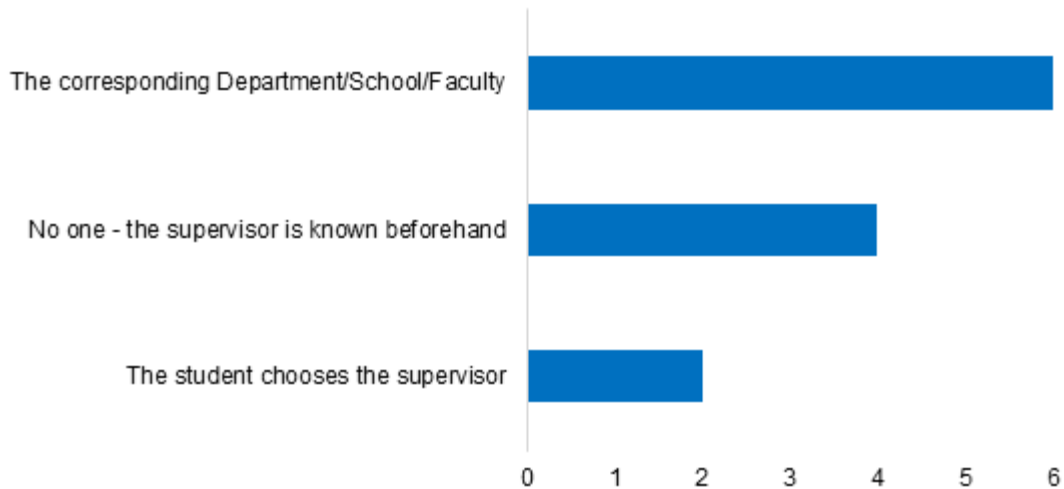
A doctoral candidate must have a supervisor, but it would be also advisable to have two supervisors, covering research areas/topics that are in the focus of doctoral research.

**Rationale:**

Assignment of supervision of a PhD candidate to a member of academic staff varies. This may be done centrally through decisions taken at high level or individually (kind of self-assignment) in cases that the person who proposed the research also undertakes the supervision of the admitted candidate. Finally, it may be the case that the candidate has the option to select among available supervisors. This question aims to investigate the extent of each alternative in the institutions that took part in the survey.

**Findings:**

### Who assigns the supervisor(s) to the PhD candidate?



#### Dominant Answer(s) and free text notes made by participants:

The assignment of supervisors is done mainly by the Department/School. It is noted that in two cases the student chooses their supervisor and it would be interesting to investigate how this is done.

#### Proposal for Issue to be discussed for the DI-PHDICTKES project:

To consider what is the process of assigning a supervisor to a PhD candidate.

#### Issues and/or Restrictions related to Standards for PhD Programmes by KAA:

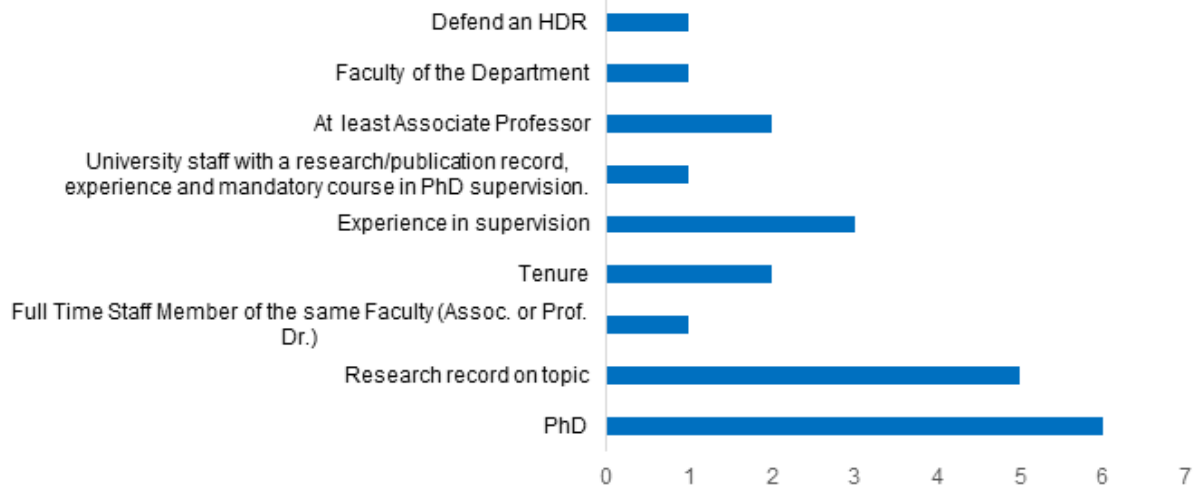
According to KAA PhD draft report, it is specified under 5.2: Supervisors must be a member of academic staff of the institution, hold a PhD and an approved academic title, an active researcher, with a minimum of three years' research experience following the award of his/her PhD; he or she must have at least 3 papers published in international relevant publications in the last 5 years (relevance of publications is defined according to international criteria for the particular field of science).

#### Rationale:

Not all academic staff in an institution can carry out successful supervision of a PhD candidate. Some institutions have set a threshold on qualifications of staff, prior experience, academic title etc. in order to be eligible for being PhD supervisors. These criteria are investigated with this question.

#### Findings:

What are the qualifications of a member of faculty to become a supervisor of a PhD student?



**Dominant Answer(s) and free text notes made by participants:**

The two expected dominant qualifications is to possess a PhD and have a research record on the topic. It is interesting to notice that all criteria seem important to a more or less extent.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider what will be the explicit qualifications (academic, professional etc) of potential supervisors.

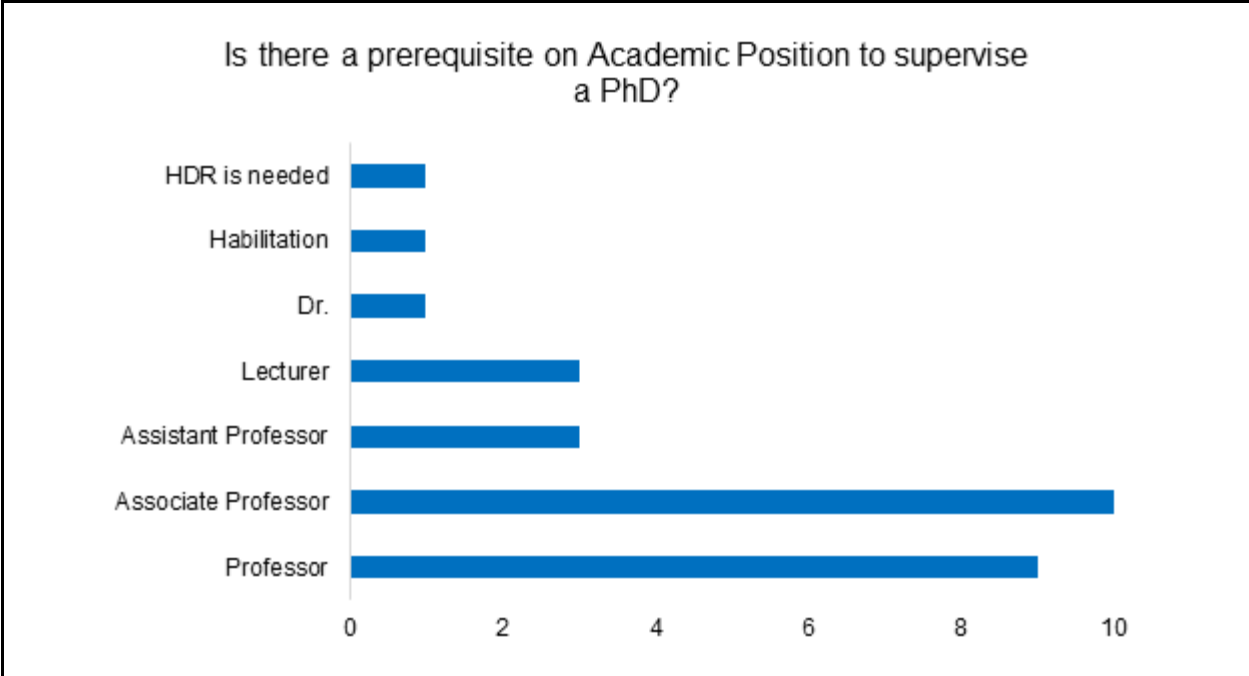
**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

According to KAA PhD draft report, it is specified under 5.2: Supervisors must be a member of academic staff of the institution, hold a PhD and an approved academic title, an active researcher, with a minimum of three years' research experience following the award of his/her PhD; he or she must have at least 3 papers published in international relevant publications in the last 5 years (relevance of publications is defined according to international criteria for the particular field of science).

**Rationale:**

Following the previous question, this question focuses on whether there are any prerequisites with regards to the academic title a member of staff should possess before they are assigned with PhD supervision.

**Findings:**



**Dominant Answer(s) and free text notes made by participants:**

It seems that mostly Professors and Associate Professors are eligible to undertake supervision of PhD candidates. It is interesting to note that this varies a lot between institutions who may assign a PhD candidate to a Lecturer or Assistant Professor.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether holding an academic title and above is a prerequisite for appointing a supervisor or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

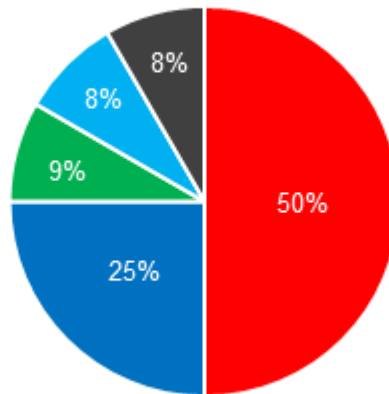
Supervisors must be a member of academic staff of the institution, hold a PhD and an approved academic title, an active researcher, with a minimum of three years' research experience following the award of his/her PhD; he or she must have at least 3 papers published in international relevant publications in the last 5 years (relevance of publications is defined according to international criteria for the particular field of science).

**Rationale:**

Supervision is not only an intuitive process that has to do with one's abilities and personality to monitor the progress of a PhD candidate and inspire the candidate in many different ways during the long research and uncertain period which may cause considerable stress and anxiety. To many respects supervision ability is an outcome of training the staff to respond to these challenging tasks. Therefore, some institutions have a training mechanism in place to ensure that anyone who is assigned as supervisor has the capacity to carry out the task successfully. This question investigates whether there exist such mechanisms.

**Findings:**

Do faculty members pass through training before they supervise PhD students?



■ Never ■ Once before the first PhD student ■ HDR is need ■ Not mandatory ■ N/A

**Dominant Answer(s) and free text notes made by participants:**

Half of the participants responded that supervisors do not pass through training before they supervise PhD candidates. One out of four declare that such training exists and it would be of interest to investigate further what such training entails.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether formal training is necessary before assigning a supervisor for the first time or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

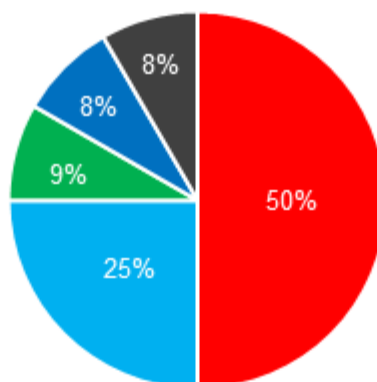
Institutions must organize professional development opportunities for supervisors.

**Rationale:**

Members of staff who are assigned with a supervisee for the first time, apart from formal training they may require mentoring by more experienced members of staff. While such mentoring is informally in place in all institutions, it is requested whether there is also a formal mechanism in each institution.

**Findings:**

Do faculty members have a mentor while they supervise their first PhD students?



■ No ■ Sometimes ■ HDR is needed ■ Yes ■ N/A

**Dominant Answer(s) and free text notes made by participants:**

Half of the participants responded that supervisors do not have a mentor appointed as part of their training before they supervise PhD candidates. One out of four declare that such mentorships exist and it would be of interest to investigate further what this entails.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether formal mentoring is necessary before assigning a supervisor for the first time or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

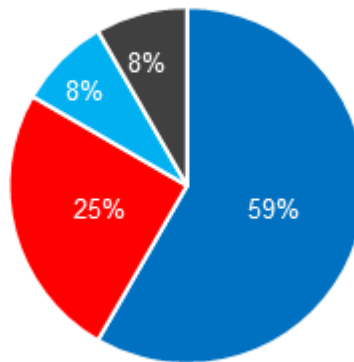
Supervisors must be a member of academic staff of the institution, hold a PhD and an approved academic title, an active researcher, with a minimum of three years' research experience following the award of his/her PhD; he or she must have at least 3 papers published in international relevant publications in the last 5 years (relevance of publications is defined according to international criteria for the particular field of science).

**Rationale:**

Co-supervision is an approach that many institutions take for a number of reasons, e.g. the research topic is multi or interdisciplinary, the research is of interest to more than one party, supervision quality is assured, contingency plans exist in case something goes wrong with supervision etc. However, co-supervision may cause some issues due to a peculiar type of diarchy and thus a conflict resolution process must be in place. Here, it is investigated whether co-supervision is formally established within the institution and thus such processes to resolve conflicts as well as other issues are clearly articulated.

**Findings:**

Is co-supervision formally established in your institution?



■ Yes ■ No ■ 3 members (mentor and two colleagues) ■ N/A

**Dominant Answer(s) and free text notes made by participants:**

Co-supervision is established in the majority of institutions.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether co-supervision (joint supervision) will be officially formalised as an option or not and if so, what are the explicit obligations for each supervisor as well as conflict resolution strategies.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

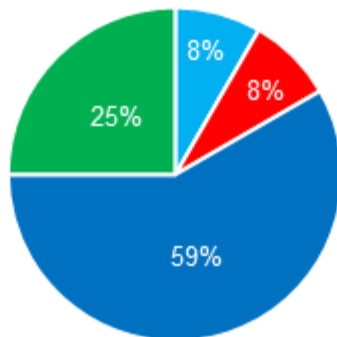
Not specified in KAA PhD draft report.

**Rationale:**

In case of co-supervision established as a possible practice within the institution, it is requested whether the co-supervisor comes from within the faculty or is an external from another institution.

**Findings:**

If co-supervision is possible, who can be a co-supervisor?



- Internal, from University
- External, from another institution
- Both internal and external
- N/A

**Dominant Answer(s) and free text notes made by participants:**

Co-supervisors can be either internal to the Faculty or external. It should be further investigated what are the contractual arrangements made for external co-supervisors.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether there should be an explicit description of who can co-supervise or not with regards to their relation with the institution (internal, external or both).

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Not specified.

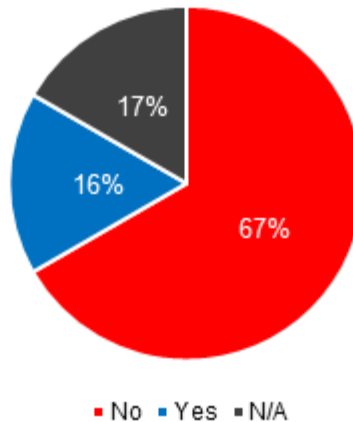
**Rationale:**

For quality assurance purposes and perhaps for audit trail by external bodies, institutions need to ensure that the processes and procedures are documented. So, apart from formal training a Handbook for Supervisors may explicitly document all processes and regulations applicable to PhD supervision. This question aims to verify the existence of such documentation.

**Findings:**



Is there a handbook for supervisors?



**Dominant Answer(s) and free text notes made by participants:**

It seems that there is no Handbook for supervisors. In one case that such a handbook exists, it should be interesting to see what this contains.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether a formal Handbook for supervisors should exist or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

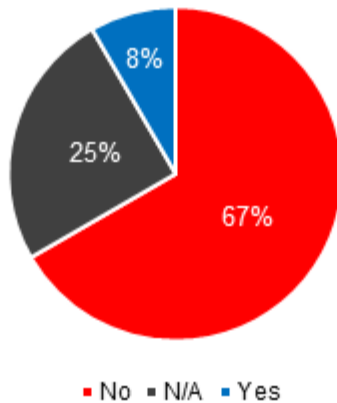
The institution has institutional regulations for doctoral programmes that are part of the existing regulations, but as a separate section addressing in particular doctoral programmes, or it is a separate document. Institutions must organize professional development opportunities for supervisors.

**Rationale:**

Virtual Learning Environments are used to support students at a lower level of studies, due to the strict programme of classes, study material, assessment, exams etc. Normally, PhD candidates do not have a strict schedule or specific material to use, neither assessed with some kind of exams. However, some institutions may have a VLE as the primary source of communication with PhD students, either this concerns Faculty-candidate or supervisor-candidate communication.

**Findings:**

Is the PhD programme supported by any VLE/Collaborative environment?



**Dominant Answer(s) and free text notes made by participants:**

It is expected that VLEs are not widely used at this level of study.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether PhD candidates will be supported through a VLE or other ad hoc means.

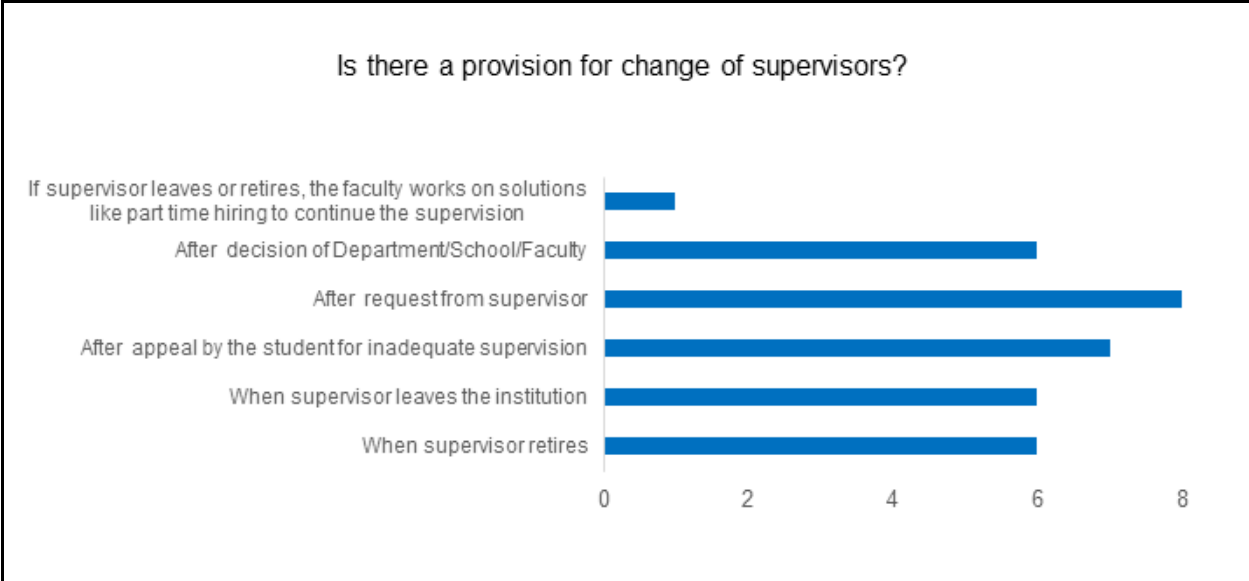
**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Not specified.

**Rationale:**

During the PhD supervision, things might go wrong. There is a plethora of issues which may arise either from the supervisor's or the candidate's side. There should be documented mechanisms that allow the change of supervisor and the criteria under which this is possible. These may be recorded in regulations and/or handbooks. This question aims to verify that there is an option of change of supervision and the reason why this may happen.

**Findings:**



**Dominant Answer(s) and free text notes made by participants:**

The vast majority has such provision. Further investigation is necessary to find out how this process is documented and formalised within institutions.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether there is a formal process for changing supervisor during the programme and under which circumstances.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

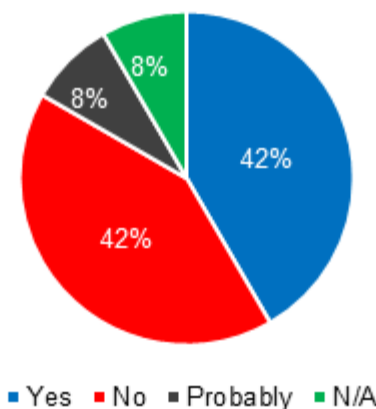
The institution has institutional regulations for doctoral programmes that are part of the existing regulations, but as a separate section addressing in particular doctoral programmes, or it is a separate document

**Rationale:**

Supervising a PhD candidate is a demanding task. Sometimes it is associated with compensation from other academic duties (e.g. teaching). However and irrespectively of the total allowance that a member of staff may have for a number of supervisions, the number of supervisees cannot be unlimited. This question investigates whether there is a predefined reasonable limit to supervisions for a single member of staff which would ensure quality of supervision, i.e. enough time allocated to each supervisee to monitor their work and establish a timely and effective communication channel.

**Findings:**

Is there a limit on the number of PhD students a member of staff can supervise?



**Dominant Answer(s) and free text notes made by participants:**

Surprisingly, there are as many institutions that have a limit as those that do not.

**Clarifications/Notes by participants (separate bullets for separate answers):**

- No formal limit, but the faculty avoids allocating too many students to the same supervisors.
- Even if a professor has helped the student with the research proposal, it is the Faculty that formally appoints the supervisors
- One staff member can supervise max 3 PhD students at the same time

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether there is a limit to how many supervisees one supervisor can be assigned or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

The ratio of supervisors to doctoral candidates in the institution should not exceed 1:3.

**Rationale:**

As mentioned above, institutions introduce some kind of allowance for PhD supervisors, so that they allocate more time to the monitoring of their supervisees and focus on the supervision task. This is a cost that institutions take to ensure that supervision takes place at the appropriate standards and levels. This question investigates what is the

compensation//allowance that a supervisor has and how it is measured/quantified.
<b>Findings:</b>
<p><b>How does your institution cost the supervision process?</b></p> <p>(see below)</p>
<b>Dominant Answer(s) and free text notes made by participants:</b>
<p><b>Clarifications/Notes by participants (separate bullets for separate answers):</b></p> <ul style="list-style-type: none"> <li>• The head supervisor gets funded by the faculty with at least 5 %. The co-supervisors do not get any faculty funding but are expected to use their funding for competence development.</li> <li>• Supervision is calculated as 1 teaching hour per week</li> <li>• Occasionally reduced teaching hours – or paying a PhD to take the lab hours. Partly it is an asset to get a PhD student</li> <li>• It does not</li> <li>• 2 teaching hours less per semester</li> </ul>
<b>Proposal for Issue to be discussed for the DI-PHDICTKES project:</b>
To consider whether there should be allowance for a member of staff that undertakes PhD supervision or not and if so how this can be quantified.
<b>Issues and/or Restrictions related to Standards for PhD Programmes by KAA:</b>
The general load of professors is mentioned in KAA Accreditation manual_11.07.2018, but not directly specified for supervision hours.

## 3.4 Taught Part and Ethics Approval

### 3.4.1 PhD Taught Part

This subsection covers the following topics:

- Is there a taught part included in the PhD programme?
- Once admitted, are there courses that the PhD student should attend/complete?
- If there are obligatory courses, is there an option for a PhD candidate to be exempted (e.g. transfer credits from previous studies)?
- How many ECTS credits are associated with the taught part?

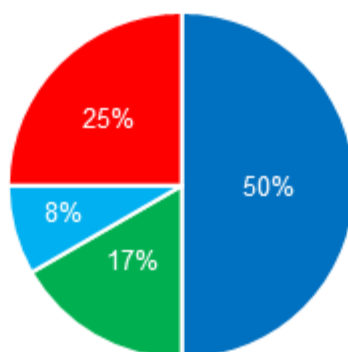
<b>Rationale:</b>								
Related to the issue of ECTS (see above), this aims to investigate whether institutions have an obligatory or optional taught part during their PhD study.								
<b>Findings:</b>								
<p style="text-align: center;">Is there a taught part included in the PhD programme ?</p> <p style="text-align: center;">■ Yes - mandatory   ■ Yes - optional   ■ No</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Yes - mandatory</td> <td>50%</td> </tr> <tr> <td>Yes - optional</td> <td>25%</td> </tr> <tr> <td>No</td> <td>25%</td> </tr> </tbody> </table>	Response	Percentage	Yes - mandatory	50%	Yes - optional	25%	No	25%
Response	Percentage							
Yes - mandatory	50%							
Yes - optional	25%							
No	25%							
<b>Dominant Answer(s) and free text notes made by participants:</b>								
In 3/4 institutions there is a taught part, in the majority of them obligatory. The aim of the taught part as well as its learning objective should be further reviewed.								
<b>Proposal for Issue to be discussed for the DI-PHDICTKES project:</b>								
To consider whether there should be a taught part during the PhD programme or not and if there is what are the courses it should consist of.								
<b>Issues and/or Restrictions related to Standards for PhD Programmes by KAA:</b>								
The programme should enable individual research opportunities; courses should not exceed 1/5 of ECTS (36 credits) of total credit hours or 20% of the total workload; programme must develop transferable skills, sufficient training in the methodology, ethics and integrity of research.								

**Rationale:**

This is a similar question to the above, in order to verify that the taught part is associated with a number of courses or other activities (such as training) that the candidate must take or carry out.

**Findings:**

Once admitted, are there courses that the PhD student should attend/complete?



- Yes, obligatory courses
- Yes, activities but not courses
- Yes, optional courses
- No

**Dominant Answer(s) and free text notes made by participants:**

In 3/4 institutions there is a taught part, in the majority of them obligatory. The aim of the taught part as well as its learning objective should be further reviewed. Some of the courses seem to be optional.

**Clarifications/Notes by participants (separate bullets for separate answers):**

- Courses to enhance soft skills required for research, which were not obtained during previous academic experience
- In lack of an MSc Degree in a related area, the PhD candidate needs to successfully complete 4 MSc Level Courses

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether a taught part (if it exists) should be obligatory or optional.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

The programme should enable individual research opportunities; courses should not exceed 1/5 of ECTS (36 credits) of total credit hours or 20% of the total workload; programme must develop transferable skills, sufficient training in the methodology, ethics and integrity of research.

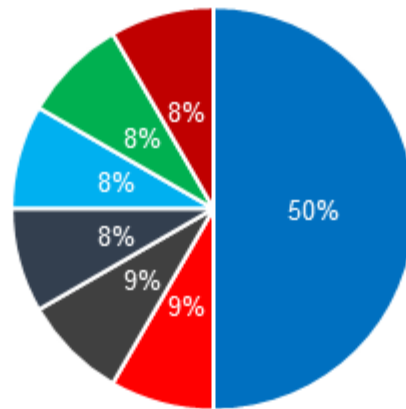


**Rationale:**

This question is in association with ECTS credits for the whole programme. It assumes that courses or activities of the taught part bear credits. We try to find out how many credits are associated with this part.

**Findings:**

How many ECTS credits are associated with the taught part?



■ N/A      ■ 18 credits      ■ 60 credits      ■ 90 credits  
■ 30 credits      ■ 15 credits      ■ 50% credits

**Dominant Answer(s) and free text notes made by participants:**

The number of credits associated with the taught part ranges from 15 to 90.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether the taught part (if it exists) should be associated with ECTS credits or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

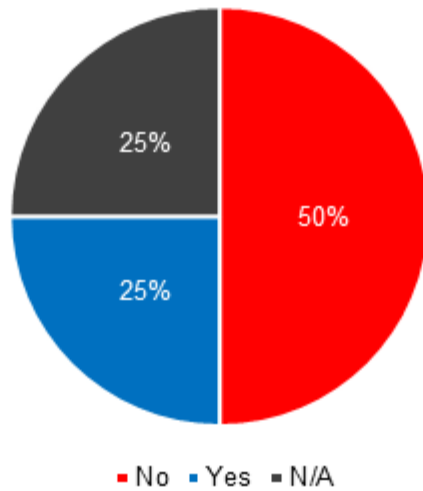
The programme should enable individual research opportunities; courses should not exceed 1/5 of ECTS (36 credits) of total credit hours or 20% of the total workload; programme must develop transferable skills, sufficient training in the methodology, ethics and integrity of research.

**Rationale:**

This question aims to find out whether PhD candidates can be exempted from obligatory courses if they fulfill some criteria, for instance, whether they have gained relevant knowledge and skills in previous studies.

**Findings:**

In case of obligatory courses, is there an of exemption (e.g. by transferring credits from previous studies)?



**Dominant Answer(s) and free text notes made by participants:**

Surprisingly, half of the participants say that there is no exemption for taught courses even if their candidates have acquired these credits in similar courses in the past.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether some students under certain explicit criteria could be exempted from the taught part (if it exists).

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Doctoral candidates should be allowed to take courses outside the institution, as well as other relevant experience, such as presentation at the conferences, popularisation of science, public speech etc. should be recognized.

### 3.4.2 Ethics

This subsection covers the following topics:

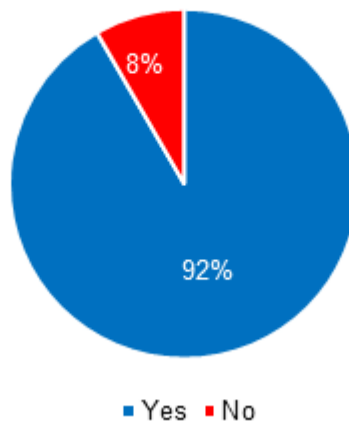
- Is there an Ethics code specific to your Institution/Department/Faculty?
- Is Ethics approval mandatory for the PhD student research proposal?
- Is Ethics approval done through a standardized University?
- Is Ethics training obligatory for students?
- Is Ethics training obligatory for supervisors?

**Rationale:**

Ethics codes are important to all disciplines. The question aims to investigate whether such ethics codes exist within each of the institutions taking place in this survey, and more in particular in the wider area of Computer Science / Informatics.

**Findings:**

Is there an Ethics code specific to your Institution/Department/Faculty?



**Dominant Answer(s) and free text notes made by participants:**

In all institutions, there is an Ethic Code. It should be further investigated how Ethics Codes vary and how they comply to international standards.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether an Ethics Code should be developed or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

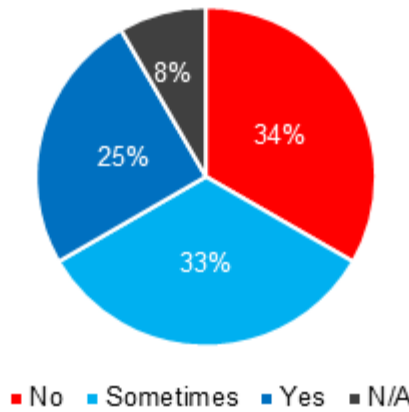
Institutions must have clear policies and procedures to address any kind of misconduct such as unethical practice, plagiarism, fabrication of data, etc.

**Rationale:**

Research in any discipline must address ethical and professional issues. Ethics approval is becoming mandatory in many institutions. PhD candidates who conduct research should apply and get approval about any ethics related issues. This question needs to verify that such an approval is mandatory for all PhD students in this discipline.

**Findings:**

Is Ethics approval mandatory for the PhD student research proposal?



**Dominant Answer(s) and free text notes made by participants:**

Responses vary. It would be expected that all candidates must receive an ethics approval before they proceed with the research, but this seems not to be the case.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether Ethics approval should be mandatory for every piece of research that the PhD candidate conducts or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

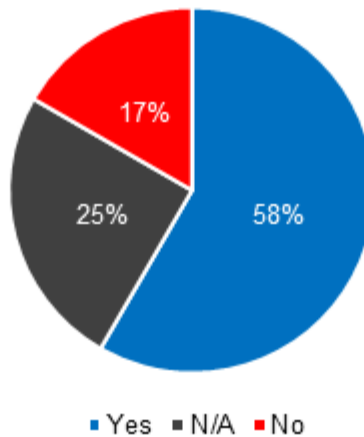
Ethics committee should be responsible for approving research with humans and animals; members need to be active researchers, with publications in relevant international journals with no records of any kind of misconduct of research, plagiarism or any other ethical issues as well as no identified conflict of interest and ensure data protection.

**Rationale:**

For those who have ethics approval as a prerequisite to conduct research, it is requested to see whether this process is carried out in a standardized University way or it is done ad-hoc.

**Findings:**

Is Ethics approval done through a standardized University Department/School/Faculty process?



**Dominant Answer(s) and free text notes made by participants:**

If ethics approval is requested, there is a standard procedure to follow. It would be of interest to gather these procedures and find commonalities.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether a standardised ethics approval process can be standardised or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

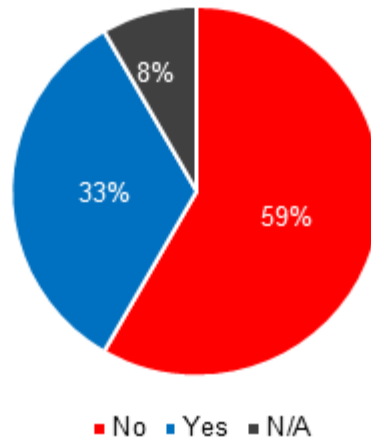
Ethics committee should be responsible for approving research with humans and animals; members need to be active researchers, with publications in relevant international journals with no records of any kind of misconduct of research, plagiarism or any other ethical issues as well as no identified conflict of interest and ensure data protection.

**Rationale:**

Understanding ethics and realising the ethical implications that research in this field has is not straightforward. Therefore, many institutions have established a formal training process for all PhD candidates in order to make sure that their ethics approval application is done without any concerns or further investigation of the actual research impact to society. This question is set so that we verify that such training is available to candidates.

**Findings:**

Is Ethics training obligatory for students?



**Dominant Answer(s) and free text notes made by participants:**

It is important to figure out that training for ethics is not mandatory, something which was unexpected if an ethics approval is required for conducting the research.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether a training course for Ethics should be developed for PhD candidates or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Not specified.

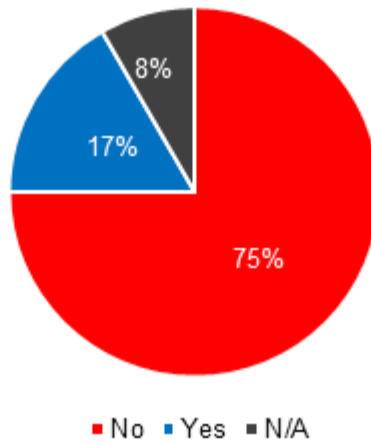
**Rationale:**

As above, supervisors need to be aware of the ethical implications of the students' research. This question is the same as the previous, but it relates to whether supervisors are trained for ethical and professional issues.

**Findings:**



Is Ethics training obligatory for supervisors?



**Dominant Answer(s) and free text notes made by participants:**

The majority of responses say that the ethics training is not mandatory for supervisors. It must be assumed that supervisors are aware of ethical issues and skills were acquired implicitly through their career path.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether a training course for Ethics should be developed for supervisors or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**


Not specified.

## 3.5 Progress, quality assurance and external input

### 3.5.1 PhD Progress

This subsection covers the following topics:

- What are the processes in place by which the PhD student progress is monitored/assessed?
- Are there actions taken if insufficient progress is made?

<b>Rationale:</b>																						
Effective supervision is the result of a process that includes informal and formal mechanisms for communicating with the PhD candidates as well as monitoring their progress. This question investigates what are the mechanisms in place which ensure that a supervisor is fully aware of the quality of the research conducted.																						
<b>Findings:</b>																						
<p style="text-align: center;">What are the processes in place by which the PhD student progress is monitored/assessed?</p>  <table border="1"><thead><tr><th>Process</th><th>Frequency</th></tr></thead><tbody><tr><td>Per semester evaluation by three-member committee</td><td>1</td></tr><tr><td>Mid-term evaluation</td><td>1</td></tr><tr><td>Mid-term PhD defense</td><td>1</td></tr><tr><td>Internal presentations</td><td>8</td></tr><tr><td>Presentations in Conferences</td><td>9</td></tr><tr><td>Publications</td><td>9</td></tr><tr><td>Interim Formal Examination</td><td>5</td></tr><tr><td>Formal regular meetings with logs</td><td>6</td></tr><tr><td>Interim Progress Reports</td><td>8</td></tr><tr><td>Informal meetings</td><td>11</td></tr></tbody></table>	Process	Frequency	Per semester evaluation by three-member committee	1	Mid-term evaluation	1	Mid-term PhD defense	1	Internal presentations	8	Presentations in Conferences	9	Publications	9	Interim Formal Examination	5	Formal regular meetings with logs	6	Interim Progress Reports	8	Informal meetings	11
Process	Frequency																					
Per semester evaluation by three-member committee	1																					
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Informal meetings	11																					
<b>Dominant Answer(s) and free text notes made by participants:</b>																						
There is no dominant answer and it seems that all institutions follow more or less the same processes to assess the progress of a PhD candidate.																						
<b>Proposal for Issue to be discussed for the DI-PHDICTKES project:</b>																						
To consider whether there should be a documented process on supervision and how it can be																						

carried out effectively and successfully or not.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

The programme must have an established process for monitoring the progress of doctoral candidates.

**Rationale:**

Sometimes there are PhD candidates who do not meet the expectations during their research. It is therefore important for an institution to have actions in place to remedy such unfortunate situations. We would like to verify that such plans exist.

<b>Findings:</b>								
<p>Are there actions taken if insufficient progress is made?</p> <table border="1"> <caption>Data for Pie Chart: Are there actions taken if insufficient progress is made?</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>83%</td> </tr> <tr> <td>Depends on the case</td> <td>9%</td> </tr> <tr> <td>N/A</td> <td>8%</td> </tr> </tbody> </table> <p>■ Yes ■ Depends on the case ■ N/A</p>	Response	Percentage	Yes	83%	Depends on the case	9%	N/A	8%
Response	Percentage							
Yes	83%							
Depends on the case	9%							
N/A	8%							
<b>Dominant Answer(s) and free text notes made by participants:</b>								
There exist actions in all institutions if a PhD candidate does not progress according to the plan. Further investigation is needed to find out what these actions are.								
<b>Proposal for Issue to be discussed for the DI-PHDICTKES project:</b>								
To consider whether actions for insufficient progress of PhD candidates should be formalised or not.								
<b>Issues and/or Restrictions related to Standards for PhD Programmes by KAA:</b>								
Not specified.								

### 3.5.2 PhD Quality Assurance

This subsection covers the following topics:

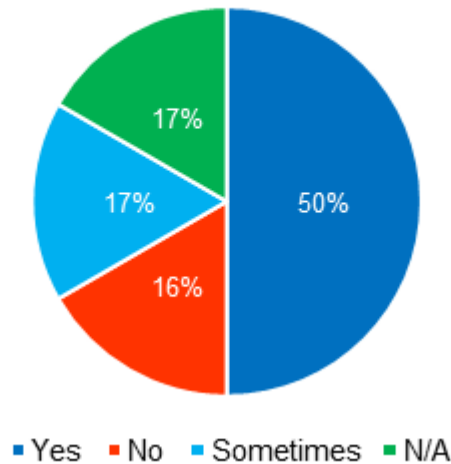
- Is there an internal person/board/committee responsible for quality assurance?
- Is there an external body (e.g governmental, national, international etc.) responsible for quality assurance?

**Rationale:**

Quality Assurance for education is established in many different ways in different countries. Normally QA refers mostly to lower levels of study. This question is to find out whether there the QA external bodies in these countries have also criteria for assuring the quality of PhD programmes.

**Findings:**

Is there an external body (e.g governmental, national, international etc.) responsible for quality assurance?



**Dominant Answer(s) and free text notes made by participants:**

In all countries, it seems that there exist a Quality Assurance Agency (or similar body) which is responsible to set guidance for quality assurance (and enhancement) of PhD programmes.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider how the external quality assurance bodies impact the programme development.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

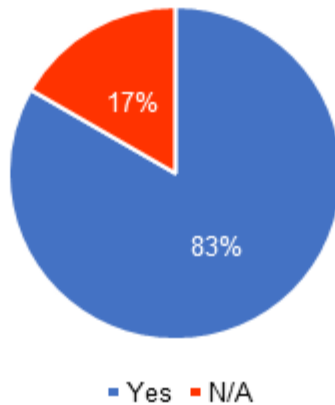
The institution has regular review and updating of the structure and the quality of the programme. The institution should also support research quality by requesting and reporting on research paper quality, external research funding, supporting a concept of research group etc.

**Rationale:**

Apart from external quality assurance guidelines and audits, institutions have their own internal quality assurance processes. This is to verify that a person or a committee within the institution has the overall responsibility to monitor and enhance the quality of the PhD programme as a whole.

**Findings:**

Is there an internal person/board/committee responsible for quality assurance?



**Dominant Answer(s) and free text notes made by participants:**

Internally to institutions, there are people who deal with quality assurance issues. It could be further investigated what is the task description of persons appointed to this role or terms of reference for existing boards and committees.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether an internal committee/board will monitor the quality assurance issues and what are its responsibilities.

**Clarifications/Notes by participants (separate bullets for separate answers):**

- Faculty board
- University board
- Vice-dean for research
- Quality assurance team
- Doctoral programme director
- Supervisor

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

The institution has regular review and updating of the structure and the quality of the programme. The institution should support research quality by requesting and reporting on research paper quality, external research funding, supporting a concept of research group etc.

### 3.5.3 External Input

This subsection covers the following topics:

- Is an advisory board considering the PhD programme?
- Does your institution consider any scientific/ professional body guidelines for the PhD programme?

<b>Rationale:</b>								
Advisory Boards are normally part of the quality assurance process for PhD programmes and implement what is called externality. Usually, they were asked to express their opinion and make suggestions to the Faculty on any matter of the programme, e.g. quality of research, currency and future directions, candidates performance, supervision process, impact of research, etc. Normally, the advisory board does not make binding recommendations but only suggestions on how things can be improved. This question is to review the participants standing on this issue.								
<b>Findings:</b>								
<p>Is an advisory board considering the PhD programme?</p> <table border="1" style="margin: 10px auto;"> <caption>Data for Pie Chart: Is an advisory board considering the PhD programme?</caption> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Internal board</td> <td>58%</td> </tr> <tr> <td>No</td> <td>25%</td> </tr> <tr> <td>N/A</td> <td>17%</td> </tr> </tbody> </table> <p>■ Internal board ■ No ■ N/A</p>	Response	Percentage	Internal board	58%	No	25%	N/A	17%
Response	Percentage							
Internal board	58%							
No	25%							
N/A	17%							
<b>Dominant Answer(s) and free text notes made by participants:</b>								
There seems to be an internal advisory board for PhD programmes. It should be investigated what are the terms of reference of such a board and how it can influence decisions taken for the programme.								
<b>Proposal for Issue to be discussed for the DI-PHDICTKES project:</b>								
To consider whether an Advisory Board should exist or not and if it does what are its responsibilities and membership.								
<b>Issues and/or Restrictions related to Standards for PhD Programmes by KAA:</b>								
Not specified explicitly in KAA PhD draft report. But, this could be the holder of a PhD program (3) according to the KAA accreditation report.								

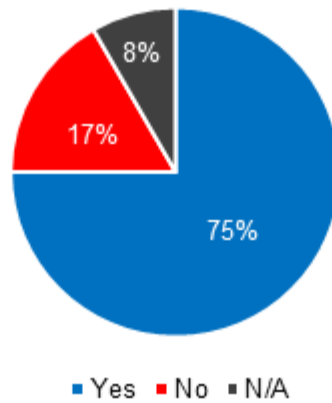


**Rationale:**

Professional bodies in each country are concerned with issues related to the profession. However, they are indirectly involved in education since the graduates become professionals in the discipline. From time to time, professional bodies express opinions and make suggestions about educating future professionals which are taken into consideration by educational institutions. This is to verify that such consultation exists.

**Findings:**

Does the institution consider any scientific/professional body guidelines for PhD?



**Dominant Answer(s) and free text notes made by participants:**

Scientific/Professional bodies seem to drive decisions taken for PhD programmes.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether the PhD programme is influenced by guidelines issued by existing scientific/professional bodies.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

Not specified.

## 3.6 General applicability and research centers

This subsection covers the following topics:

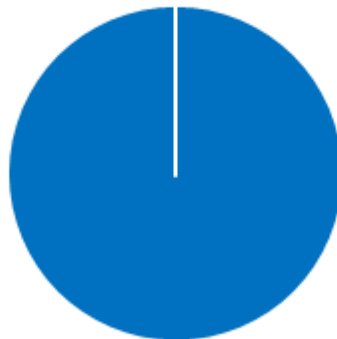
- The above describe what happens in your Institution. Do they apply to a large extent to any Higher Education Institution in the country?
- If necessary at a later stage, will you be able to provide documentation to support/describe your answers above?
- Is there a separate Research Center associated/included in your Department/School/Faculty?
- What are the relations/links between your Research Center and the PhD programme?
- Does the Research center have a separate strategy?
- Does the Research Center have its own policies and procedures?
- Is there a separate Organizational Structure in the Research Center?

**Rationale:**

We needed to ensure that our survey is not only restricted to the institutions that participated in this but are valid to a certain extent to their countries as well. We know that practices in educational matters within one country do not differ dramatically from one institution to another. We would like to ensure that the review covers the country perspective to a great extent.

**Findings:**

Do the above apply to a large extent to any Higher Education Institution in the country?



■ To a great extent

**Dominant Answer(s) and free text notes made by participants:**

It is verified that the responses given to all areas of interest of this review reflects to a great extent what happens in most of the institutions in their country, something which gives the review some greater validity.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether the developed PhD programme is in line with all Universities regulations in Kosovo.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

According to KAA, all programs should be in line with KAA requirements and law in higher education institutions.

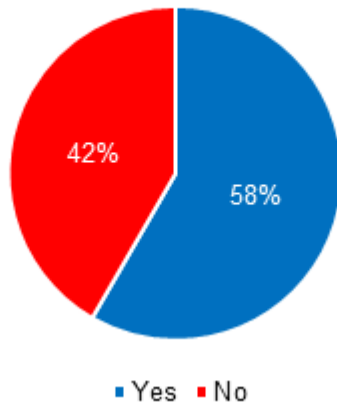
**Rationale:**

Institutions may have Research Centers that are established to carry out specialised research on targeted areas. Although Research Centers are in principle autonomous, they are often associated with Departments/Faculties. This question is to investigate what is the situation in the participants' institutions.

The question is useful to consider if we view a Research Center as an equivalent to PhD School (related to the aims of this project).

**Findings:**

Is there a separate Research Center associated/included in your Department/Faculty?



**Dominant Answer(s) and free text notes made by participants:**

The responses are split in this question.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether a separate Research Center should be established that will accommodate the PhD programme.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

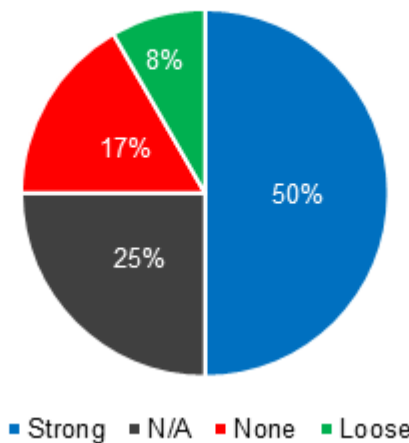
-

**Rationale:**

Association between Research Centers and Departments/Faculties may vary in strength, e.g. some may use resources including human resources from Department/Faculty, while some may be totally autonomous. This question is to investigate how tightly the Research Center and Department/Faculty are coupled.

**Findings:**

What are the relations/links between your Research Center and the PhD programme?



**Dominant Answer(s) and free text notes made by participants:**

It seems that PhD programmes and research conducted through them are not necessarily bound to the existence of a Research Center. However, in half of the cases the relations are strong.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider what will be the relation of the Research center (if it is established) with the Universities involved in the PhD programme.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

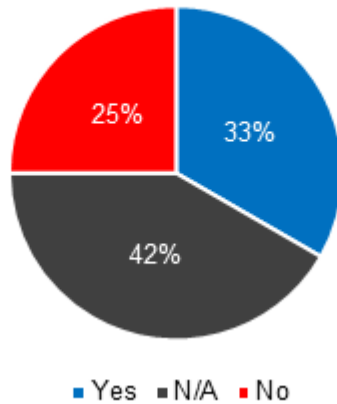
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**Rationale:**

Research Centers, depending on their autonomy, have or not have a separate strategy to conduct research, to get funding, to grow etc. This again looks at independence of the Research Center with regards to strategic goals as opposed to the ones that Department/Faculties might have.

**Findings:**

Does the Research center has a separate strategy?



**Dominant Answer(s) and free text notes made by participants:**

Again this is split. In some cases the Research Center seems to be independent of the Faculty/Department while in some others not.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether the Research Center (if it is established) will have its own Strategic Plan.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

-

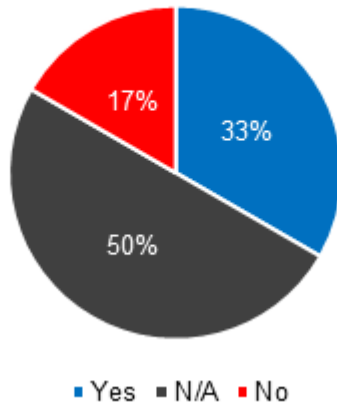
**Rationale:**

This is another view of independence between a Research Center and an associate Department/Faculty. The policies and procedures might or might not be different from the

associated Department/Faculty.

**Findings:**

Does the Research Center has its own policies and procedures?



**Dominant Answer(s) and free text notes made by participants:**

In some cases the Research Center has its own processes and policies which shows their independence.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether the Research Center (if it is established) will have its own policies and procedures.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

-

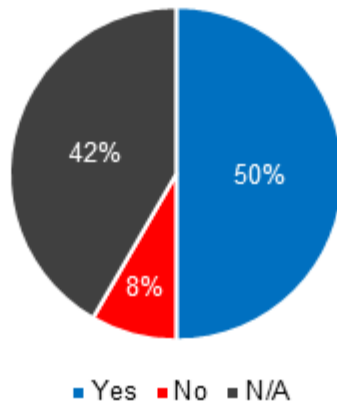
**Rationale:**

Finally, governance and organisational structure might or might not be different from the associated Department/Faculty.

**Findings:**



Is there a separate Organisational Structure in the Research Center?



**Dominant Answer(s) and free text notes made by participants:**

In most cases the Research Center has its own organisational structure which shows their independence. It would be of value to investigate further what is the organisational structure of such centers.

**Proposal for Issue to be discussed for the DI-PHDICTKES project:**

To consider whether the Research Center (if it is established) will have its own Governance and Organisation Structure.

**Issues and/or Restrictions related to Standards for PhD Programmes by KAA:**

-

## 4. Summary of proposals

Following the findings of the survey and the commentary presented for each section, this is a summary of proposals for Issues to be discussed for the DI-PHDICTKES project.

Issues to consider and discussed (we underline those of higher priority):

### General

- Whether the title of the award will be PhD in Computer Science / PhD in Informatics or more specialised.
- Whether the award will include specialization, i.e. the area of research, or not.
- Whether both Full time and Part time students will be admitted and what is the difference between the two.
- What is the minimum and maximum period of study (duration) for either Full time or Part time students.
- Whether the PhD programme will bear any ECTS and how many.
- Whether there will be procedures for extending the period of study and leave of absence due to extenuating circumstances.
- Whether Full Time candidates will be allowed to work elsewhere or they will exclusively conduct research for their PhD.
- What will be the Regulations of the PhD programme and how it will be integrated with the rest of the institution's regulations.
- Whether a Handbook for studies will be developed for candidates or not.
- Whether an academic director will be appointed in order to have responsibility for the whole programme or not.
- Whether there will be fees or not and if there are, whether they are going to be opportunities for fee waivers (associated with potential scholarships)
- What will be the explicit criteria for awarding scholarships, if they exist.
- Whether scholarships (if they exist) will be associated with reciprocal tasks for the institution or not.

### Entry criteria

- Who would be the person or institutional body which will set up the advertised PhD topics.
- Who would be the person or institutional body which will decide who is going to be accepted for the PhD programme.
- Whether an interview will be conducted before deciding about the acceptance of a candidate or not.
- When it will be the most appropriate period to advertise PhD topics and admit students.
- what will be the explicit criteria under which an applicant will be accepted in the programme.
- What will be the exact documentation submitted together with the application for admission in the programme.

### Graduation criteria

- What will be the explicit criteria (including KPIs if necessary) to award a PhD after the submission of a thesis. Thesis specification should be also agreed.

- Who takes the decision (person or institutional body) for the award and whether external (to the institution) examiners will be consulted or not.

### Supervision

- How many supervisors will be assigned to each PhD candidate.
- What is the process of assigning a supervisor to a PhD candidate.
- At which stage is the supervisor assigned to a PhD candidate.
- What will be the explicit qualifications (academic, professional etc) of potential supervisors.
- Whether holding an academic title and above is a prerequisite for appointing a supervisor or not.
- Whether formal training is necessary before assigning a supervisor for the first time or not.
- Whether formal mentoring is necessary before assigning a supervisor for the first time or not.
- Whether co-supervision (joint supervision) will be officially formalised as an option or not and if so, what are the explicit obligations for each supervisor as well as conflict resolution strategies.
- Whether there should be an explicit description of who can co-supervise or not with regards to their relation with the institution (internal, external or both).
- Whether a formal Handbook for supervisors should exist or not.
- Whether PhD candidates will be supported through a VLE or other ad hoc means.
- Whether there is a formal process for changing supervisor during the programme and under which circumstances.
- Whether there is a limit to how many supervisees one supervisor can be assigned or not
- whether there should be allowance for a member of staff that undertakes PhD supervision or not and if so how this can be quantified.

### Taught Part

- Whether there should be a taught part during the PhD programme or not and if there is what are the courses it should consist of.
- Whether a taught part (if it exists) should be obligatory or optional.
- Whether the taught part (if it exists) should be associated with ECTS credits or not.
- Whether some students under certain explicit criteria could be exempted from the taught part (if it exists).

### Ethics

- Whether an Ethics Code should be developed or not.
- Whether Ethics approval should be mandatory for every piece of research that the PhD candidate conducts or not.
- Whether an ethics approval process can be standardised or not.
- Whether a training course for Ethics should be developed for PhD candidates or not.
- Whether a training course for Ethics should be developed for supervisors or not.

### Progress, quality assurance and external input

- Whether there should be a documented process on supervision and how it can be carried out effectively and successfully or not.
- Whether actions for insufficient progress of PhD candidates should be formalised or not.
- How the external quality assurance bodies impact the programme development.
- Whether an internal or external committee/board will monitor the quality assurance issues and what are its responsibilities.
- Whether an Advisory Board should exist or not and if it does what are its responsibilities and membership.
- Whether the PhD programme is influenced by guidelines issued by existing scientific/professional bodies.

### Research centers (related to this project PhD School)

- Whether a separate Research Center should be established that will accommodate the PhD programme.
- What will be the relation of the Research center (if it is established) with the Universities involved in the PhD programme.
- Whether the Research Center (if it is established) will have its own Strategic Plan.
- Whether the Research Center (if it is established) will have its own policies and procedures.
- Whether the Research Center (if it is established) will have its own Governance and Organisation Structure.

### Alignment

- Whether the developed PhD programme is in line with all Universities regulations in Kosovo.

### Documentation:

We suggest that some selected institutions (preferably partners) share some of the formal documentation that they possess (in confidence), so that following work packages will have a basis for implementation and development of the project specific deliverables.

## 5. Conclusions

This report was developed as deliverable 1.2 for Work Package 1 of the project DI-PHDICTKES: “The development and implementation of PhD Curricula in ICT for Kosovo Education System”.

The aim of the work package was to analyse existing PhD programmes in Europe. An online survey was conducted from 12 participants who have either finished their PhD studies or are employers of respective Universities reflecting the current situation in 11 corresponding countries. The Universities were requested to answer a number of questions which cover all areas of PhD programme provision, ranging from admission to progression and award, also including a number of issues related to quality assurance.

The results were grouped and analysed. Findings showed what are the main trends and arrangements in all Universities that participated in the survey. The dominant answer was derived and was accompanied by free comments which gave more clarifications to specific issues.

As a result of the analysis, a number of issues were identified that are proposed for discussion within the project. The list of proposals will feed future work packages which will deal with details for decisions to be taken and how these decisions will be implemented.

# References

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