Guiding students away from plagiarism

Jude Carroll and Carl-Mikael Zetterling

Learning Lab

Guiding students away from plagiarism

Jude Carroll and Carl-Mikael Zetterling

Guiding students away from plagiarism /
Hjälp studenterna att undvika plagiering
Jude Carroll and Carl-Mikael Zetterling
ISBN 978-91-7415-403-0

Layout: AMGD
First edition

Introduction

This guide is for teachers and students. Most of the chapters discuss issues that are probably more interesting to teachers but we have also added a section in each chapter suggesting how students would benefit from reading it.

Plagiarism is a world-wide problem and actions taken to prevent it have been intensifying since about 2001 when teachers and university managers began to realise the impact of digitalised text, of the Internet, global communications and increasingly efficient search engines. These mean there are changes in how students access and use information when they do assignments, especially home assignments. The resources now available in Swedish, and especially in English, have meant that students can now find and use others' work in ways that were previously not possible.

KTH is joining world-wide endeavours to address the issue of student plagiarism. Part of the KTH effort is represented by this guide.

Plagiarism is defined as ***submitting someone else's work as your own***.

A student's work can be declared to be plagiarism if it shows unacknowledged use of other people's ideas and materials. Plagiarised student work makes it seem as though the ideas or materials are the student's own rather than making it clear where in the material the student has included work from others. The same is true if students include others' words and do not show that they are quoted.

There are well-developed methods for demonstrating that work is derived from others' work or others' words. Acknowledgments may include referencing and citation systems, explicit descriptions of how the work was developed, and academic writing styles which give explicit signals of where ideas, words, images, figures and other such materials are used in the student's own work.

Many students find explanations about acknowledging and using others' work to be neither straightforward nor easy to understand and it is not always simple for teachers to identify plagiarism in their student's work.

This guide explains how teachers and students should apply KTH requirements for original work. When students are able to do their own work, when they understand why doing independent, original work is essential for university-level study, and when the students know how to put their understanding into practice – then the problem of plagiarism simply disappears.

1. Why read this guide?

❋ Why teachers should read this guide

Teachers will find answers to the many questions they have about plagiarism:

- ‘What is it?’
- ‘Why does it happen?’
- ‘What can I do to prevent it?’
- ‘How can I spot it?’
- ‘What do I do once I find it?’

Teachers will save time and boost students’ learning by taking the steps described in this guide. It suggests ways to integrate plagiarism prevention into everyday teaching responsibilities. The guide encourages cooperation between colleagues across a programme and shows ways to work efficiently. The last point is important since most teachers’ worries about dealing with plagiarism centre around the time they fear it might take. KTH teachers may be reassured to know that many teachers around the world have put these actions into practice and have found, as one said, ‘They do take a bit more time but the effort need not overwhelm you if you think about what you want to achieve’.

Ironically, this guide is not actually about plagiarism – it is about learning and about ensuring that students develop the skills and knowledge we expect of them at KTH. When students plagiarise, either through intentional cheating or through misunderstanding what is expected of them, then plagiarism allows that student to bypass learning. Plagiarism means students submit someone else’s work instead of their own. Making sure the students do not avoid learning is the primary reason that teachers need to pay attention to the points in this guide.

Each chapter is self-contained and there is no need to start at the beginning and read to the end. Often, teachers start with whatever issue has popped up in their work:

› Some start when they get a case.
› Some recognise that their students are struggling to master university studies.
› Some hear of the problem through the media or from colleagues.
› Some are concerned about student cheating.

‘Start anywhere’ is the good news; the bad news is that the problem can only be prevented by combining all the actions. More about the KTH integrated, or holistic, approach later in this Introduction.

✱ When teachers act, they must follow the rules

If a student's work makes you, the teacher, suspect that the student has attempted to deceive you through copying or using others' work without acknowledgement, then the rules are very clear: you must report the case for possible disciplinary action. Chapter 5 sets out the procedures that must be followed in detail.

However, not all plagiarism is cheating. Many would claim that only a small number of plagiarism cases involve an attempt to deceive. Nevertheless, all cases of plagiarism must be addressed because plagiarism means that students are not completing the learning necessary for the course. This guide offers detailed guidelines for managing cases of plagiarism where there is no cause to suspect an attempt to deceive. These too must be followed to ensure consistent and fair treatment of students at KTH.

✱ Why should KTH *students* read this guide?

Students need to know what teachers expect them to do. They need to develop their academic skills and build their understanding of how assignments will check their learning. The more you, as a student, understand about plagiarism the less you have to worry about it. This guide is mostly for teachers but in each chapter, we also offer advice to students. There is also a section on developing your academic skills and, in particular, on developing your academic writing.

This guide will not tell you all you need to know about plagiarism because avoiding plagiarism requires many different skills. So, you will need to discover how to locate authoritative texts and to develop referencing and bibliographic skills – the Library can help you with that. You will need to identify exactly where your teacher wishes you to stop sharing information, data and ideas with fellow students and only the teachers themselves can help you with that question. You will need to learn to use sources to support and justify your arguments in your writing - your dissertation supervisor will help with that. This guide helps you examine the issues and better understand why these skills are necessary.

2. KTH's integrated approach to plagiarism

Plagiarism is a complex issue and therefore it needs a complex, cohesive set of solutions to deal with it. This guide offers sections for each of the many different aspects of plagiarism. It starts with defining plagiarism and explains what kinds of plagiarism are problems at KTH. The guide outlines the steps that should be taken to reduce the chances that KTH students will plagiarise. These steps include advice on how to start long before teaching a course, at the stage when the course syllabus is written. It suggests ways to design assignments so it is hard to copy and advises on using draft work to build students' understanding of what is expected. It shows how to drop in knowledge about plagiarism whilst teaching your subject rather than taking time out to teach about this topic in isolation. Later chapters describe how to detect cases, and what to do if a case of plagiarism, or of cheating, is found.

All the different activities in this guide work together in a way that is often referred to as ‘the holistic approach’ to plagiarism. Getting them all in place will take time but this guide provides a resource and instruction while KTH continues to improve its management of student plagiarism.

3. The link between plagiarism, learning and skills

As already stated, student plagiarism at KTH breaks the link between learning and academic credit. If a teacher judges a student’s work to be satisfactory, then the student is awarded academic credits. On the other hand, when students copy or borrow others’ work they cannot show their own understanding and, since the work is not their own, then the learning cannot be their own either. Students’ work involving plagiarism should not be given credits. This is so whether the student intended to cheat or not.

At KTH, students show their understanding by changing and using what they find in the original source. They do not show their understanding by simply reproducing the original source. Of course, not all students at KTH think about showing their learning in the way just described. Not all KTH students realise when they come to KTH that they must hand in work which shows a personal understanding of the topic. Nor do they all realise that unless they change someone else’s words or use someone else’s idea to support or reinforce their own work or their own words, then the teacher cannot judge whether or not the student truly understands the original source.

All students at KTH must learn to correctly acknowledge others’ work no matter what their understanding when they begin studying here.

4. KTH examples

Throughout the guide there are examples of KTH assignments and KTH teachers’ actions which show how the guide is already being followed. If you know of any other examples, please send them to the KTH Learning Lab and they can be used as examples in the next edition of this guide.

5. A word especially to students

This is the first of the sections which speak directly to students (though teachers are welcome to 'eavesdrop' too).

Many students say they have heard about plagiarism from newspapers and from other students. They may worry about accidental plagiarism or even fear that their teachers might be more interested in catching them out than in helping them do good work. Take the existence of this guide as evidence that the second scenario is not true. For 'accidental plagiarism', here are some reassurances:

- You must comply with the rules about acknowledging others' work but you will have time to learn about these things and to be taught the necessary skills. Until you know, any plagiarism will be treated as a learning error and not a reason to report you for breach of discipline.

- Some students wonder whether they will be accused of plagiarism if they come up with an idea themselves, but they did not know that someone else had already come up with the same idea and already 'claimed' it by publishing or speaking about the idea. This is a false worry. It may happen but the teacher will not say 'this is plagiarism!'. The teacher will say, 'You should have found out that N. N. said this, too'. At most, claiming others' ideas shows your research was not as thorough as it should have been. Again, this is a learning error.

- Some students worry that they will be accused of copying because they use universally-accepted ways of saying something or explaining something. This way of using others' work is fine and your teacher will see that this is not unacceptable copying but that you are using accepted phrases and ways of explaining ideas. If you are not sure whether something falls under this heading, do ask your teacher or a suitable specialist for guidance.

This guide encourages your teachers to give you the information, guidance and feedback you need to really understand what the phrase, 'do your own work' really means. It also gives you the backing you need to ask for this type of help from teachers where it is not yet forthcoming.

6. More information on the guide website

In several places we refer to more information on the website, which we expect to be updated often. As the amount of information will evolve and change, rather than give specific links in the text we direct you to one page only for all information. This guide will also be available electronically at this location.

www.kth.se/plagiarism (English version)
www.kth.se/plagiat (Swedish version)

We will also give the links to the *Higher Education Ordinance (Högskoleförordningen)* in both English and Swedish, since these links are rather complicated. In several places we refer to Chapter 10 which covers disciplinary measures. We also mention the course syllabus, sometimes called course plan, which is compulsory according to Chapter 6, see Sections 14 and 15 (in Swedish this is *kursplan*). This should not be confused with the *course information (kurs-PM)*, which is handed out the first day of class. At KTH the course syllabus is ordinarily established by the School up to one year before the course starts.

Chapter 4 about detection mentions some text matching tools used at KTH: Urkund, GenuineText and Turnitin and also BILDA which is used in courses. Links to more information and manuals are available on the guide website.

The School contacts for disciplinary matters will also be listed on the guide website.

7. Acknowledgements

This book was written during 2008-2009 as a part of the KTH project on quality assurement of examination. Many people helped us in the production of this book. We are especially grateful to colleagues in the KTH Learning Lab, Mats Hanson, Kristina Edström and Mats Nyberg, who helped structure and produce the book. Marianne Öfverström, Maria Palma-Hakim and Gustav Axberg spent hours cogitating on the finer points of the regulations and choosing the right words. Ann-Sofie Henriksson, Mattias Alveteg, and Sara Thyberg Naumann commented on drafts and offered many useful suggestions. Viggo Kann and Ninni Carlsund Levin gave us examples from their teaching. Without you this book wouldn't have been as good as it is, but all remaining errors are our responsibility.

Jude and Carl-Mikael, June 2009

1.1Defining plagiarism

The word 'plagiarism' has come to mean *'claiming someone else's work as your own work'*.

Notice that the word 'work' is used in the definition. This shows that plagiarism covers a wide range of activities from composing music to writing a novel. Here at KTH, the focus is on assignments where students hand in their work to earn a grade.

The Higher Education Ordinance (SFS 1993:100) does not specifically mention plagiarism, but states (Chapter 10 Section 1):

Disciplinary measures may be taken against students who
1. by prohibited aids or other means attempt to deceive during examinations or when academic work is otherwise assessed,

We will use the phrase "attempt to deceive" in the following. This is the official translation from Högskoleförordningen 10 kap. Disciplinära åtgärder, which states:

1 § Disciplinära åtgärder får vidtas mot studenter som

1. med otillåtna hjälpmedel eller på annat sätt försöker vilseleda vid prov eller när en studieprestation annars ska bedömas,

Work at KTH where plagiarism may occur include:

- **written assignments.** Here, plagiarism occurs when students use other people's words and also when they claim other people's ideas without making clear who actually deserves the credit for writing these words or for thinking up these ideas.

- **practical assignments and technical projects**. Plagiarism can happen when writing computer code or documenting an experiment – it happens if the student claims credit for work that was actually done by others.

- **design work**. Students designing new objects will draw on others' ideas and be inspired by their creativity, however the work they hand in must be something that was created by the student him/herself. This means students will need to modify, develop or change the ideas drawn from others in order to make them their own.

✱ Plagiarism in written assignments

Three kinds of student plagiarism are common in written work.

› Copying words and ideas from published sources

If students copy words or ideas from a published source straight into their assignment without acknowledging the source – then this is plagiarism. Students can also plagiarise when they copy ideas by making a summary or a paraphrase of the original text (that is, by writing it in a different way) without acknowledging the source of the original idea or words. The most common way to acknowledge others' ideas and words is by putting a reference or a citation into their text at the point where the idea or the words are used.

There are well established conventions for citing/referencing others' work. Different schools at KTH will ask students to use different referencing systems but all referencing systems are the same in that they all show how and where students have used others' ideas and others' words.

It is not enough simply to list sources in a bibliography. By not using an in-text citation at the point where others' words and ideas are used, how the student's text was created is unclear to the reader.

› Copying from other students

Students plagiarise in written work and in practical work by copying another student's work and then claiming or pretending that it is their own.

Students usually know that copying another student's answers, solutions or assignments is against KTH rules[1] . Most teachers also agree that student-to-student copying is unacceptable.

[1] Local evidence for this statement is currently anecdotal although studies are planned. Other studies indicate this is likely, for example: Ashworth et al, (1997), Guilty in whose eyes? University students' perceptions of cheating and plagiarism in academic work and assessment, *Studies in Higher Education*, 22:2, pp. 187-203.

Students sometimes say that this kind of plagiarism is not serious because students might be learning something from copying. Students in one study even claimed this was not plagiarism but was 'checking'[2]. However, KTH expects all students to do their own work when solving problems. Chapter 5 of this guide suggests more consistent ways of managing student-to-student copying at KTH.

Chapter 3 of this guide suggests ways that teachers can discourage this kind of copying by being careful in the assignments they set. Assignments which seem to encourage copying between students should not be set.

› Working too closely with other students

Most teachers encourage students to discuss their work. Collaborative work is a rich source of ideas and insights and mirrors how the teachers themselves work with colleagues and how the students will work professionally once they graduate from KTH. Yet university studies require that each student shows individually that they have met the learning requirements of the course. If they work so closely with other students on individually-assigned tasks that the final result turns out to be identical or near identical this is classified as unallowed collaboration.

This is different from straight copying because here, the students each do some work. However, it is not acceptable if the students were told that the assignment was to be an individual piece of work.

It is difficult to clarify the line between cooperation and copying. Its location is always context-specific; that is, teachers must set the line for specific assignments and must do so in keeping with their own disciplinary factors. Later chapters of this guide will address the issue of 'crossing the line' between cooperation and collusion in more detail.

✱ Plagiarism in practical work and in computing code

It is important that students 'do their own work' when they write computer code, when they document an experiment, create a design or answer a mathematical problem. If they do not do these activities themselves, yet claim the results as their own, this is plagiarism.

[2] Parameswaran, A. and Devi, P. (2006), Student plagiarism and faculty responsibility in undergraduate engineering labs, *Higher Education research and development*, 25:3, 263 – 276.

Teachers who set these practical assignments must make it clear how much help, collaboration, borrowing and using of others ideas is acceptable. They also need to tell students how they should show where they have used others' work in their final results.

1.2 Cheating and plagiarism

There are students who buy, steal, copy or otherwise simulate their academic 'work' (sic)[3] . Deliberate cheaters know what they should do and have had many chances to learn the KTH rules and to develop their academic skills. A small number of deliberate plagiarists compound their cheating with other misconduct such as lying or intimidating other students into providing work. These are very serious events and the procedures in Chapter 5 describe how KTH deals with such cases.

In serious cheating cases, students are excluded from the University for up to six months. Even a short exclusion can have serious consequences for students' progression at KTH and can compromise requirements for extended visa, and graduation within the time for valid visa.

✱ Why do students deliberately cheat by plagiarism?

Students who deliberately cheat can almost always offer explanations[4] for their actions. Some refer to personal capabilities such as:

- poor planning and leaving work to the last minute
- not being confident of producing satisfactory work
- feeling a lack of necessary skills

Some students explain deliberate cheating by referring to external pressures such as:

- feeling parental or other pressure to excel
- believing that a high grade is necessary for their career plans
- juggling demands such as work or private life commitments
- being subject to conflicting academic deadlines or tasks

[3] Using 'sic' after a statement shows that the statement has a mistake in it that has been deliberately left in. 'Sic' here means that the authors of this guide do not consider the assignment submitted using plagiarism to be true work, even if the student claims this to be the case.

[4] Some people would rather call these excuses.

Some students say plagiarism is justified and criticise the task or the course. Students can explain copying or faking an assignment as due to:

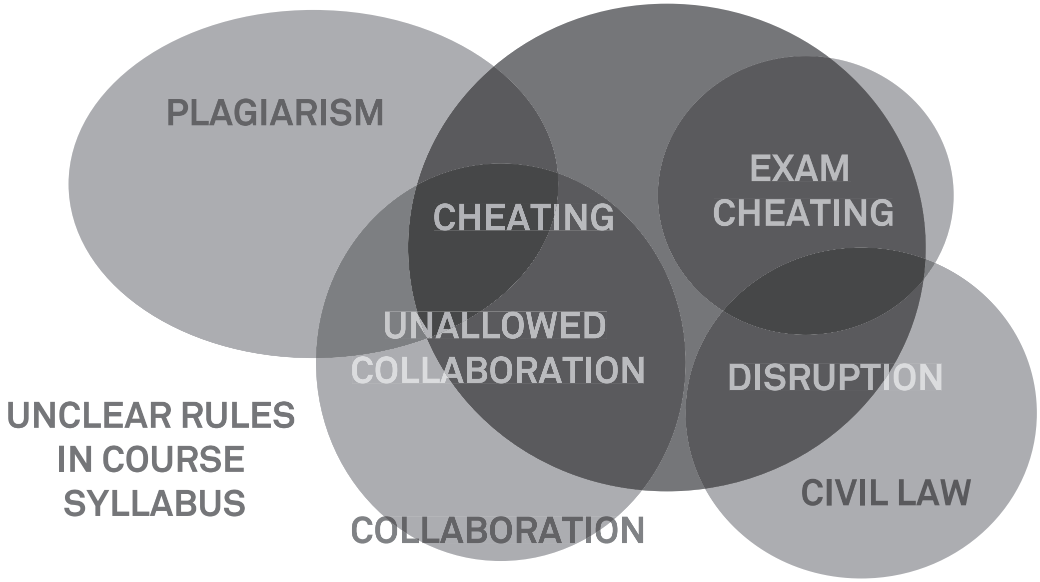
- regarding the assignment as dated, irrelevant or unimportant
- assessing that the teacher did not care about the assignment and, therefore, students need not care either
- finding it was very easy to just copy an answer, and so it seemed the logical thing to do!

✱ Not all plagiarism is cheating

Cheating requires students to attempt to deceive people about their examination work. Students who plagiarise often say they did not intend to pass off others' work as their own or to attempt to deceive the teacher marking their work. They often say they did not understand what the phrase 'doing your own work' meant. These students claim no one has taught them to attribute others' ideas in transparent ways such as by using an accepted referencing system. Often, students who plagiarise say they were continuing to use practices from previous educational settings or from outside the university. ('This is what we did in High School' or 'This is what we did in my home country') They did not realise that 'the rules' changed when they came to KTH. Finally, many say no one taught them the skills needed to follow the KTH rules such as how to locate and judge sources, or how to summarise others' ideas, or how to use a particular referencing system.

In some cases, students do acknowledge that someone told them briefly to 'use references' or to 'use their own words' or 'make your own code'. Perhaps there was a lecture about it or a page in the course information which stated how students should reference work. However, when such information sessions are followed up, it is clear that students often do not understand the instructions and they do not know how to act on them. It seems that telling students the rules is a useful first step, however is not sufficient to be able to assume they understand what is needed. Later chapters in this guide will develop this issue further.

HEO CHAPTER 10, DISCIPLINARY MEASURES
"attempt to deceive"



The Higher Education Ordinance does not cover the border between plagiarism and "attempt to deceive" in detail. We hope it will be clearer after reading Chapter 5 of this guide.

1.3 Informing students about academic citation and referencing

Students need to realise, soon after they begin their studies, that independent work, in-text citations and bibliographic references are all necessary in university assignments. They need to quickly learn acceptable ways to complete problem-solving assignments and to reference their writing assignments. At KTH, we are working hard to ensure that students get this information systematically and explicitly. Chapter 2 in this guide addresses the issue of helping students to master academic citation, programming and problem solving.

While students are learning the rules, teachers who are grading students' work need to guard against attaching the full force of the 'plagiarism' label to student errors. Teachers also need to be patient with students who use inaccurate citations or informal methods of showing they are using others' work. For example, a student might show she is making a paraphrase through using an expression such as, 'As the previous paragraph shows….' and then fails to put in a citation to say where the previous paragraph's ideas came from. In this example, the student is showing, in an informal way, that the words and ideas come from elsewhere. This example cannot be an attempt to deceive the reader. However, for

KTH teachers, it is important in all cases to tell the student to pay more attention to developing skills in accurate citation. Inaccurate citation is one example of a learning error rather than serious, deliberate plagiarism.

Chapter 5 deals with ways that teachers manage students' attempt to deceive and cheat. It also explains what to do if the teacher thinks the plagiarism is a learning error.

1.4 How common is student plagiarism at KTH?

We do not need to know exactly how common plagiarism is in order to consider it serious and worth the attention of students and teachers. Anecdotal evidence shows that KTH teachers feel there is a problem. Students and the Student Union say there is a problem. The university administration is taking active steps to manage the problem.

The incidence of deliberate, serious plagiarism seems to be low or very low at KTH, although there are no definitive statistics for this university or for Swedish universities as a whole.

The incidence of plagiarism through students' misunderstanding of what is expected and through their lack of skill in using academic writing conventions is much higher than from deliberate cheating as reported through the disciplinary procedures. The relatively high level of plagiarism through misunderstanding is found especially in some assignments and amongst some groups of students.

✱ Do some groups of KTH students plagiarise more than others?

There is some evidence that students who are getting low grades and those who lack confidence in themselves as learners are more likely to choose to plagiarise[5]. Younger students tend to do so more than older ones, undergraduates more than postgraduates and men do so more than women[6]. Students who do not value an assignment often look for shortcuts. One student explained the difference like this:

[5]As in students' work, this kind of statement requires a citation – not to prevent plagiarism but to provide evidence to support the claim. In this case: Bennett, R. (2005). Factors Associated with Student Plagiarism in a Post-1992 University, **Assessment and Evaluation in Higher Education**, v30 n2 p137-162

[6]These sorts of statements are supported by many studies. One example: McCabe, D. & Trevino, L. (1997), Individual and contextual influences on academic dishonesty: A multi-campus investigation, **Research in Higher Education**, 38:3, Pp. 379-396

"If I wanted to learn to play the guitar, it would make no sense to cheat. But if I was asked to write a paper about guitar playing, well that is another matter."

However, none of these predictive factors are very strong. Whitely and Keith-Speigel[7] found the single best predictor of future plagiarism to be past plagiarism – in other words, students who take up plagiarism tend to keep on using it. This finding might encourage teachers to intervene early in students' university 'career' to try and discourage this bad habit.

One explanation is that many KTH students have previously studied outside of Sweden in educational systems where to reproduce others' words and/or to present (rather than to interpret) others' answers was regarded as good. However, the same can be said for many students from Swedish secondary schools, plus it is probably true of people coming to KTH from work in an office or factory. All probably presented answers to questions without stating the source of their answers. *All* students coming to university probably need to revise their assumptions about acceptable practices when solving problems and writing papers.

Other factors to identify some groups of students more easily as plagiarists include:

- some students who possess relatively weak language skills when writing in English. It probably seems much 'safer' for students who worry about their English to copy someone else's words.
- believing that the teacher is more interested in a perfect text than in the student's understanding of what the text says.
- not having the courage to try out new ways of showing their understanding, especially if there is a high 'cost' of failure.

It is very clear that some students are more likely to be *identified* as plagiarists and to be reported for penalties. This is the case with international students, especially those writing in English as a foreign language. Why might this happen?

It is true that most students writing in English at KTH are likely to be using a non-native language however for some the difference between their known capacity in English and the language used in the English text submitted (or differences within the text) are so significant that an assessor often feels that action must be taken. It may be that other students are equally often copying from others' texts but are just more skilled at smoothing over the 'joins'.

[7]Whitely, P. and Keith-Speigel, B. (2002) Academic Dishonesty: an educators guide, Taylor and Francis, New York.

On the last point, lack of parity in detection rates amongst different student groups is often given as a primary reason for acquiring more 'objective' ways of identifying copied texts. Software packages (such as Urkund and Turnitin) can identify places in the student's text which match texts held on a database or on the Web. Such tools can identify copied text in submissions by skilled writers. Chapter 4 discusses how such tools can be used in more detail.

1.5 What should happen if a student is suspected?

Since plagiarism inhibits students' learning, all instances where students submit others' work as their own need to be addressed. However, different cases require different handling.

In cases where there is cause to suspect that the students attempted to deceive the teacher about whether or not the work was their own, these cases must be reported as stated in Chapter 5. In other cases, where no cause to suspect an attempt to deceive is involved, students are judged to be still developing their understanding and academic skills. In the 'no cause to suspect an attempt to deceive' plagiarism cases, teachers must manage these cases as instances of pedagogic / learning error. Guidance on differentiating between attempts to deceive and learning errors which involve plagiarism will be provided in Chapter 5.

The Higher Education Ordinance (SFS 1993:100) Chapter 10 Section 9 (in English translation) states that:

If there is cause to suspect offences such as are referred to in section 1, the Vice-chancellor[8] shall promptly be notified.

In the Swedish version it says:

9 § Grundad misstanke om sådan förseelse som anges i 1 § skall skyndsamt anmälas till rektor.

In the text on the Ordinance, we tie together Section 1 (see beginning of this chapter) and Section 9 thus:

"cause to suspect an attempt to deceive"

and in Swedish "grundad misstanke om forsök att vilseleda"

[8]The translation states "vicechancellor", which should be Vice-chancellor (UK) or President (US) as the equivalent for rektor in Swedish. We will use Vice-chancellor in the following

Instances of plagiarism which are handled within the students' courses must be dealt with consistently. Chapter 5 also explains these guidelines and procedures.

❋ A word to students

It will help you to read all of this chapter because it gives background information about plagiarism and it highlights the most common instances in which it occurs. The chapter points out how little is known about plagiarism at KTH. We need to have more data, more studies about students' decisions to cheat or not, more studies on how KTH students learn about plagiarism. If you are asked for your own views or experiences, please take the time to give this information. The Student Union is also interested in this topic and is working with KTH to improve knowledge and data. Why not support their work as well?

CHAPTER TWO / STRATEGIES TO DESIGN PROGRAMMES AND COURSES THAT PREVENT PLAGIARISM

The suggestions in this chapter complement those in Chapter 3 on how to set assignments and tasks so the answers are hard to copy and/ or are hard to find. In this chapter, the emphasis is on course design and teaching strategies.

As the diagram on the next page shows, these actions are stretched out over a long period of time with some starting months or even years before teaching starts; others occur during the course itself and some are needed after it is finished. Ideally, teachers will adopt most or all six of these activities. If they do, this would demonstrate the holistic or integrated approach because combining all these actions would offer students an integrated, cohesive learning experience. As stated at the start of this guide, a holistic approach is the one which is most likely to prevent plagiarism since any one action in isolation cannot address this complex issue. However, achieving a holistic approach will take time and joint effort across KTH. Any one of the actions listed will be a good starting point for preventing students from plagiarising. Each step is explained in detail after the short list.

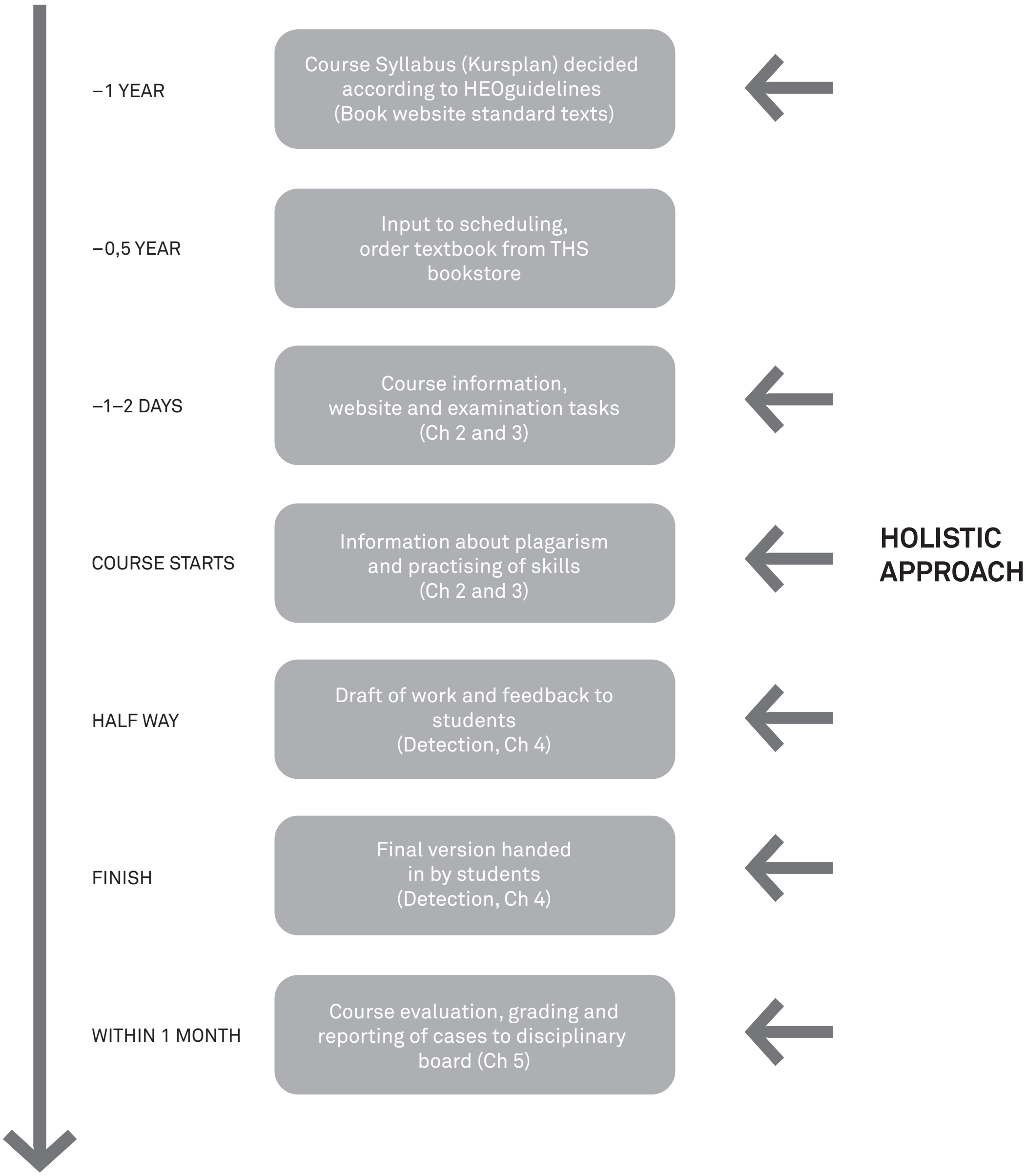
❋ A six-step strategy for deterring plagiarism

2.1 Inform students about plagiarism

Students do not arrive at KTH with the knowledge they need to follow the rules. Telling them what they should NOT do ('Do not copy' 'Do not cheat' 'Do not plagiarise') is not the same as informing them what they SHOULD do. Even telling them what they should do is not sufficient. Saying students should 'Acknowledge others' work' 'Do their own work' or should 'do original work' usually makes little sense to students who do not already have a good grounding in academic writing and problem solving.

KTH teachers cannot assume this grounding in knowledge and understanding from any students, even those joining programmes in Year 4, or those pursuing postgraduate study. It certainly cannot be assumed for students starting undergraduate study (though some students have been trained in academic writing and citation in their secondary schools). All students will need information about what is expected of them at KTH.

A TIMELINE FOR COURSE DESIGN AND REALIZATION



2.2 Provide early practice, early 'wake-up call'

Early checking of students' understanding helps both teachers and students know what the students still need to learn. Identifying their knowledge and skills is best done through giving students a practice piece of work very early in their university studies.

2.3 Teach students the skills they will need

For written assignments, students will need many skills, including (but not only) knowing how to reference their work. Other necessary skills include: how to identify good sources, to take notes, to use ideas and words from sources appropriately, and to use conventions for in-text citation. The students must structure their work and must become familiar with the discourse styles used in their discipline. Although a few students can teach themselves these things, most will need a more systematic learning process.

For practical tasks and project work, students will need a range of skills such as programming, problem solving, use of technical equipment and how to complete appropriate reports. They probably also need to develop self-management skills such as how to manage time and meet deadlines.

Teaching students these skills is as important as teaching them the content knowledge they need in order to put the skills into practice. Teachers will also need to design in opportunities for students to practise these skills so that, over time, they become confident and can use them independently.

2.4 Structure the assessment process itself

Instead of just setting work and hoping the student will use efficient and effective strategies for completing an examination task, it is much more helpful (especially at the start of a programme) if teachers find ways to get students started and to track their efforts as they complete home assignments.

Suggestions for managing the process include using structured demands *(a title this week, then an outline next week, then a literature review etc)*, requiring peer feedback on interim writing and breaking large tasks into sections with interim deadlines. Effective supervision of large tasks also verifies that the work submitted is, indeed, that of the student.

2.5 Authenticate (that is, check who did the work that is handed in)

This means checking who did the work that has been submitted. There are many ways to check if the work which the student submits is the real ('authentic') work of that particular student. Authentication is especially important if the suggestions previous (concerning making the process visible) are not used or if students are part of a distance-learning programme.

2.6 Try formative use of software to check for copying

Chapter Four describes the use of software to detect plagiarism after submission. However, the same software can be used to check for copying in written assignments and in computer code before it is declared a final version. Use before final submission can draw students' attention to where their work is not yet acceptable and make the teacher's requirements for changing the text even more significant.

Development of best practice is underway for using tools such as Urkund and Turnitin to support the teaching of writing skills. There is evidence to support the belief that formative use of text-matching software is helpful – if certain steps are followed.

Course/programme design strategy 2.1

INFORMING STUDENTS

For the programme as a whole, students must know what plagiarism is, what they are expected to do when constructing their answers to assignments and problems, and general guidance about the way students should share and discuss their work with each other. Students need to know why KTH is interested in preventing plagiarism and why they must avoid it in their examination work. Students need to know where they can find additional information and guidance. They need to know what will happen when a case of plagiarism is identified and in particular, what will happen if a case if referred for disciplinary action.

This information needs to be given in a planned and systematic manner so that students neither miss it nor are given it repeatedly. This means working at the programme level to map where and how the information will be given. In programmes where planning and coordinating of courses is commonplace, telling students about plagiarism will be straightforward. Where courses are run as independent units within a programme, this will be more challenging.

Here are some methods used by coordinated KTH programmes to inform students about plagiarism:

- Masters Coordinators in all the schools organise introduction sessions for incoming students which include lectures on academic writing and plagiarism. The sessions are optional and are attended by about 50% of the students.

- Some programmes provide guidance on dissertation writing for students. This guidance includes information about acceptable referencing systems and an example of a student's dissertation where good citation practices are used.

- A programme in 2009 organised a special two-hour lecture on plagiarism in the second semester of the Masters programme and invited all Masters students to attend. The session was additional to students' scheduled lectures.

- The Library advertises specialist courses on searching for and selecting authoritative sources. They are developing a specialist course on preventing plagiarism.

At the level of individual courses, students must know what methods will be used to assess their work and when the methods will be used. So, for example, if they will have an oral examination to check if the student who claims to have done the work actually understands what it contains, then this must go into the course syllabus and course information. The diagram at the start of this chapter explains the time line for when these decisions must be made so they can be correctly conveyed to students. In each course, students must also know how the teacher expects them to interpret the requirement that their work is independent and original. If students are working in groups, collaborating on some aspects of their work, or encouraged to seek additional help from specialists such as proofreaders, information literacy experts such as Librarians, or even placement supervisors, then the teacher needs to explain that this help is encouraged and also make clear when the help should cease.

The course syllabus and course information must also make clear how much students must work independently and how much they can draw upon and use others' work without specifically acknowledging the work of others.

Providing written information

- The guide website provides examples of texts that can be used in the course syllabus and course information.

- Students can be asked to sign statements such as has been introduced in the Department of Economic History at the University of Lund. In this example, the students must read and sign that they have understood.

Providing information through interactive teaching

This kind of session checks students' knowledge by asking them to distinguish between unacceptable and acceptable ways of creating assignments. These activities need to be done interactively with additional time allowed for asking questions and discussing any issues that arise from the activity.

Examples of activities which help students develop their knowledge about plagiarism:

- Showing examples of students' work

  A collection of examples, some modified to show particular aspects of plagiarism, could be used. Students could diagnose the mistakes or they could decide which pieces of work are likely to receive a good mark and which might be classified as plagiarism.

- An exercise on unauthorised collaboration

  A copy of this activity is provided on the guide website. This activity is specifically designed to trigger discussion about how students can, and may not, work together in their examination work.

- Classifying what is acceptable paraphrasing and what is plagiarism

  See the guide website for one way that this could be done.

Teaching through on-line tutorials

Students can be directed to websites where plagiarism is explained in general. The guide website lists some useful sites. Note that students are unlikely to actually follow up on this instruction unless there is some way of checking or using the information they found in their on-line investigation. Also, generic information usually needs to be tailored to fit the specific situation of a course or programme.

Course design strategy 2.2

EARLY DIAGNOSIS

Unfortunately, if teachers merely tell students what KTH expects, this often has little or no effect on students' understanding and/or on their work habits. This is especially true if the 'telling' only covers what *not* to do *[Do not cheat. Do not copy. Do not work too closely with friends.]* Some students can 'learn the hard way' by receiving negative feedback from teachers. ('Johan, this is bad work!'). However, many teachers ignore unacceptable actions in the early days; hoping students will pick up the right habits over time. Other teachers give students feedback *('You must show your sources')* which students either ignore or misunderstand.

A suggestion: instead of telling students what they must do or offering brief feedback on what they did wrong, teachers could assign students small tasks, early in their studies. These could be short writing tasks, simple programmes or introductory designs. Tasks could require a mix of independent and collaborative work, with a view to identifying if the students can distinguish correctly between the two.

Small tasks have learning value in themselves. Students are practising skills which are relevant to the course and they are using discipline-specific content. However, the main function of early tasks is to allow both teachers and the students themselves to discover whether or not students know about plagiarism and whether those who *say* they know can act on this knowledge.

Teaching through practice work

If a student submits unacceptable work in the diagnostic / practice task, then the teacher's feedback needs to be very explicit. Usually, feedback for these early tasks is common for many students' work. Teachers usually comment on:

- whether or not the student used too many phrases from the original source in their summary without indicating them as direct quotes
- whether they copied directly from texts or lecture notes
- which kind of statements require citations
- when in-text citations would strengthen the argument

and so on. Instead of noting such points on individual pieces of paper, the teacher can create documents which address such points plus suggestions on how to correct them. Relevant pre-written documents could be emailed or stapled to the student's submission.

Early diagnosis means students can correct misconceptions before they tackle large or significant pieces of work.

Examples of early diagnostic tasks at KTH:

An early diagnostic task	A teacher asks her students to identify and summarise a recent media article related to the topics covered in lectures. They must comment 'in their own words' and they must support any comments about the article by using the literature on the reading list.
An early diagnostic task	A teacher asks Master's students soon after arrival to write a short paper on a straightforward issue linked to the course. In this case, students must use at least three sources of information beyond their reading list. Students then hand in their work electronically. All scripts are posted anonymously on BILDA and students allocated three scripts to review against criteria linked to KTH regulations on independent work, referencing and attribution. Each student gives the paper a mark based only on those criteria.

Each student's own grade depends on how closely their judgment and their marks of their fellow-students' work match that of their teacher. The closer the match, the higher the mark.

An early diagnostic task

Student's draft work is submitted to the text-matching tool, Urkund, and the results are discussed individually with each student. [See approach number 5 below for more on this form of diagnostic activity.]

Course design strategy 2.3

TEACH WRITING SKILLS SO THAT STUDENTS CAN AVOID PLAGIARISM

Students at KTH are expected to use referencing and citation systems. Often, 'learning the referencing' can seem to be little more than the mechanics of applying the formatting conventions of a specific system. In fact, students will need a range of skills to become adequate writers at KTH and the issues relating to whether or not to place a comma in the citation or how to include page numbers are trivial aspects of a much larger issue. Nevertheless, covering these aspects is necessary and several KTH departments offer explicit guidance. For example, the Land Management (ABE) department provides guidance on how to write references and provides a sample piece of student work that shows good use of footnotes. This is showing writing skills in action.

Showing skills helps students learn. Some will gain these skills by reading and by noticing how others write. However, many will need to set aside previous writing styles (such as copying large chunks of others words without citation) and adopt some new ones for KTH. In general, all students will need both explicit teaching and feedback on their skills as they practise KTH academic writing.

Saying that a skill 'needs teaching' does not mean it needs to be covered in a lecture, perhaps using time that the teacher wishes to devote to content-teaching instead. Skills can be taught much more 'along the way' as teachers and students discuss topics and issues in their discipline.

Specific skills requiring teaching or covering 'along the way' include:

- How to locate good sources ('searching beyond Google')
- How to judge the authority and credibility of sources
- How to collect information from a wide range of sources, usually via taking personal notes of their content.
- How to use others' ideas in the student's own writing text (direct quotes, paraphrases and summaries)
- How to indicate that words, ideas and other material are derived from others, and are not the student's own work. Usually, this is done by means of in-text citation).
- How to collect and create a reference list.

There are many excellent publications that cover these issues which students can also be asked to consult.

Examples of KTH activities designed to teach referencing and citation skills

An example of one way to teach skills	One KTH teacher uses his own publications as examples to show students the components of academic writing. *['Here is a paper I wrote where I…..']*
One KTH teacher's method for teaching skills	Many teachers use journal articles and research reports for review and discussion. One teacher who is responsible for teaching writing uses this specifically to discuss the author's use of citation and referencing with students. *What are the citations doing? Where are they placed? What types of source are used to support the author's arguments? Etc.*
One idea on how to teach students about citations	Retype (or request it be retyped) a section of a discipline-relevant article without the in-text citations. Tell the students how many citations were present in the original and ask them to replace only that many citations. *Where do they go and why?*

Teaching students about authority and credibility of sources	In addition to the usual aspects which students are asked to consider when evaluating research papers or journal articles, ask them to analyse the credibility and authority of each source cited. *Why is a referenced journal more authoritative than a book?* Teachers could even ask speculative questions: *Which is more credible: a blog or an interview transcript? How does Wikipedia compare with an article in the* Economist *when judging authority?*
Teaching students how to use quotations	Find different ways that direct quotes are used in a discipline-relevant article or in previously submitted student work. Ask students to rank the best three examples of using quotes: Which are best and why?
Teaching students how to paraphrase	Select a piece of text which is not itself a paraphrase – so, avoid text books and summary articles. The most useful examples are short descriptions of investigations or small-scale studies. Create four paraphrases of the original, some acceptable and some unacceptable. Ask students to judge each version as to whether it retains the ideas of the original but in the second author's 'own words'.
Using Urkund to teach academic writing	Ask students to analyse an Urkund report from a piece of student work – *what advice would they give this student author to improve his or her academic writing? What advice would they give this student about 'doing your own work'.*

Course design strategy 2.4

TRACK AND STRUCTURE THE STUDENTS' WORK WHILE THEY ARE DOING ASSIGNMENTS

Suggestions in this section have two aims:

› *to get the students started* promptly on assignments (since those who delay until the last minute may regard plagiarism as one of their few remaining options)

› *to assess the process* by which the student creates his or her work as well as assessing the student's final product. Presumably, the student is doing the work in order to learn and by showing students how this learning occurs and how the work progressed, the student may be better able to recognise and value the learning involved.

✱ 'Get them started'

As a way of making sure students are not leaving work to the last minute, teachers could:

› Break the task down to several sub-tasks, each with a deadline. Then check the deadline has been met.

› Ask students to present 'findings so far' orally in class

› Ask for an outline to be brought to a specific class then sign and date the outline. Later, when the students hand in their final work, require the students to hand in the signed outline as well.

Teachers and students need to remember that 'ensuring activity is occurring' is not the same as assessing it. Formative assessment can be time-consuming and unrealistic, given teachers' workloads. However, verifying that work has started can help students develop their own time management skills – perhaps.

✱ 'Track students' progress'

Many teachers say that if they see the work being done, they are sure it is the student doing the work. Several ways this could be done are:

› Set aside class time for the work. Students could be asked to actually do the work in class with teachers watching this happen, or they could discuss their progress with others.

› Set up an on-line discussion where students review and comment on each other's work. The software will show the dates when this happens. Note: students are not likely to do this unless it is designed into the course as a required learning activity.

- Ask others to comment on the work. Include in the examination instructions the requirement for others with knowledge of the content to read and comment on the text. This is especially important if KTH students are writing about experiences which contributed to their learning and assessment.

  For example, one teacher asks students on a placement to have the report read by the placement supervisor who adds his or her own comments.

- Seek comments on group members' contributions. If the work was done jointly with other students, ask the group members individually to comment on the process of completing the work.

Examples from KTH where teachers have tracked and verified student work

One teacher who uses the strategies designed to organise and structure students work comments: 'It works because I make them work'. Here are some suggestions:

Organise peer review of students' own work.	A KTH teacher provides students with a checklist of what they should look for *('Look for this…. This…. This')*. He has noticed that this step is crucial to them doing peer review well. He also gives them the peer review task outside of class time so they do it carefully. To make the students take comments seriously, he asks them to incorporate suggestions into their final work. Feedback for peers also goes to the teacher so he can check this has been done where appropriate.
Give teacher feedback on student's drafts and examples	Many teachers do this. Teachers have found time-efficient ways to give feedback: they use macros & template answers, note faults with an underline but only correct it once, limit the issues / topics for feedback (for example, only commenting on the use of sources) and use whole-group feedback *('I noticed these five mistakes most often in all of your work…..')*

… probably the most effective technique in the whole chapter… but also the most time-consuming.

Using BILDA to track work

Putting students' work on BILDA makes it public and for some students, that in itself will cause them to make rather than fake work. This is especially true if reading and reviewing each other's work becomes part of the course design. One teacher said (perhaps not completely seriously), 'The best person to spot plagiarism is another student'.

BILDA also creates a corpus of past submissions so students know if they copy from previous work, it is more likely to be spotted.

BILDA is the portal for using Urkund, a text matching tool, so if students begin to equate use of the two, this can help steer them towards doing their own work.

› Organise discussion groups for large projects and important pieces of work

Students would only use these if required to do so but if reporting on progress and discussing any difficulties became part of the task, then a BILDA-based discussion would allow a teacher who is observing to see how active people were on the task. BILDA can also be used to track work.

Course design strategy 2.5

AUTHENTICATE THAT THE WORK IS THE STUDENT'S OWN WORK

Teachers can include methods of checking on who actually did the work that a student has handed in for a grade: authenticating the process by which the student did the work, or authenticating the final product.

Checking for authentication is less important if some of the other strategies in this chapter have been used. However, sometimes authentication becomes more important. For example, teachers need to check the work's authenticity if:

- the student's work has largely been 'out of sight', perhaps even carried out geographically far away from KTH
- a class is so large that it is not possible for the teacher to know the students individually or to know each one's usual standard of work
- distance or e-learning packages are used to set work
- systems put in place to monitor work have broken down or have not been used (for example, if the student has not attended supervision sessions or has decided to work in his or her home country)

❋ Methods for KTH teachers to authenticate the process

› Using workshop situations where teachers see the product emerging

This strategy is used in many design programmes. In some, teachers will not accept work unless the student attends group workshops and creates the piece in that format, sometimes over several weeks. The argument here is that work presented afterwards, with no evidence of process, cannot be authenticated as that of the submitting student.

› Regular meetings and supervision

Many KTH teachers do this regularly as part of their role. In addition, regular meetings reassure teachers that the student is doing the work and is actually developing. It is important that meetings are regular. One-off encounters, well before the final hand-in date may just show the student how far away he or she is from an acceptable standard – such encounters can encourage students to consider asking others to do the work instead of trying to reach the standard themselves.

One KTH teacher does not allow students to change their topics except right at the start of the project/dissertation. Another has learned to be wary when students select their own topics. Occasionally, a student's choice is more influenced by finding a finished piece of work than by personal interest. Where self-selection of topics is allowed, supervision becomes even more important.

❋ Methods for KTH teachers to authenticate the product

› Oral examinations

A KTH Computing course includes a five-minute discussion with all students after they have submitted their programming assignments. The discussion asks students to explain how they solved certain problems in the programme and asks them to orally 'annotate' their work.

› Practical labs to check that students can change their work

Computing students are asked to submit their programmes then, in a practical lab with teachers watching and within a designated time, students are asked to make a small change to their programme. The rationale for this request is that students who wrote the programme can change it and those who copied or relied too heavily on others, cannot. This strategy therefore assesses students' understanding as well as confirming the work's authenticity.

› Examinations which are observed by officials ('invigilated')

In some cases, examinations can be more about authenticating learning than they are about measuring learning. In distance learning courses, there is often no alternative but to require students to come to an invigilated examination in order to prove their identity. Invigilated exams require known students to demonstrate their learning. Examinations can also be used to verify the content of home assignments. For example, students can be asked questions about their home assignment in order to check their understanding.

› Short-scheduled laboratory reports

Copied lab reports are a common worry for teachers. One way to ensure they are authentic is to ask students to complete them during the practical session, handing in the result as they leave. This means the results will be rough although many argue this, too, is more realistic as it equates with the way findings are reported outside of higher education. Students could be given a standard template to simplify their reporting and could be encouraged to provide analysis and discussion in note format or bullet point lists. If this approach is taken, it is important to teach discipline-specific writing skills elsewhere.

Course design strategy 2.6

USING TEXT-MATCHING TOOLS FOR FORMATIVE FEEDBACK

Universities pay for using a text-matching tool such as Urkund, GenuineText or Turnitin primarily to identify copied text and then to check whether it is correctly acknowledged. This use for detecting copying is described in detail in Chapter 4 of the guide. Here is an additional use: to provide students with formative feedback as a part of learning referencing and attribution skills. Studies have shown formative use is a valuable way of teaching academic writing[9] as long as certain guidelines are followed.

Good practice guidelines for using text-matching tools

› **The teacher should show the report to the student but not give a copy to the student**

This means the teacher can point to examples of acceptable and unacceptable work and make general learning points. If a student has the report, there is some evidence to show that he or she is tempted to make minor changes to text to 'make the colours go away' and is less likely to learn the generic points for future work.

› **Provide more formative feedback on drafts and less on the final result**

Re-allocating the teacher's time to comments on drafts helps students learn whereas feedback on graded work is often ignored as 'past history'. Focusing primarily on drafts means teachers need not spend more time on students' work but can spend the same amount more effectively.

› **Do not expect the text-matching tool to replace teaching**

Discussing the report should be additional to usual skills teaching. Often, a report can have the effect of grabbing the student's attention

[9] Barrett, R. & Malcolm, J. (2006) Embedding plagiarism education in the assessment process **International Journal for Educational Integrity**, 2:1

so that they do start to pay attention to academic writing requirements. But it cannot replace teaching.

❋ Ensuring formative use fits with KTH policy

› A teacher must say, 'You must change this'

KTH teachers who have tried this use of Urkund (as well as other ways of giving feedback to students on their draft work) have reported that some students do not make the changes to their work as instructed by teachers. Perhaps students assume that, since their unacceptable work caused no problems at the formative stage, then nothing bad will happen when they submit it either.

Teachers offering formative feedback need to make clear to students that they are not giving suggestions but rather that the student must make the changes to avoid a fail and indeed, now that they have been given this feedback, to avoid being reported for disciplinary action if their final work is plagiarised.

› Teachers must keep a record of the feedback event

Teachers need to note when the feedback was given along with the warnings of consequences if changes were not implemented in final submissions.

2.7 Extra guidance to students on academic writing

Reading this chapter will make it clear how complex the issue of plagiarism is because it shows how many ways teachers can use to address it. Why not judge whether your own KTH student experience included some or all of these strategies?

The section on skills development may be the most useful and if your programme does not include all these activities why not try them yourself by using past home assignments to check feedback, investigate whether sources have been used well, and identify what skills are needed to develop further.

This section is about how to write papers correctly at university. It only highlights some issues. It will be necessary to find additional books and learn much more before it is possible to become a confident writer at university.

Writing in a research environment

Universities are research environments and university writing is based on the style of writing that is found in published papers in your own subject area. Your teachers expect your writing to be similar to the writing in your textbooks, in journal articles and reports. Students' academic writing and academic reading must match.

Writing in different subject areas

Academic writing will vary between different subjects but, in general, no teacher wants you to write just facts. Your teachers do not want you to merely summarise what was in the reading or write what they said in lectures.

Instead, when writing, consider a question or topic from several angles. Start with an outline of facts or briefly describe a theory. This is just the groundwork. Next, students are expected to explore important issues involved with the topic. Usually, questions are create by you, and then answered by you. This kind of writing is often called a 'discussion'. Suppose the topic is a form of new technology, then the questions you create and answer might be: *How secure is the underpinning science? Where has it been applied and was it successful? Who is in favour of using this new technology and who is against? What else needs development?* and so on. As well as the discussion, an 'evaluation' of your answers will certainly be expected – that is, say how confidently your reader can judge your own conclusions about the topic.

The first link between academic writing and plagiarism

Academic writing in Sweden asks you to show that you understand many aspects of the topic but, more importantly, academic writing asks you to take a personal stance on the topic and then, be able to defend the stance that you take. This is why copying others' ideas and words is not acceptable; even if it was acceptable in the writing you did before university. Copying other people's ideas and others people's words does not show your understanding and it does not show your personal views. It is just copying.

The second link with plagiarism

When writing to show your understanding and writing to show your personal views, you cannot just declare them as in *'I believe this and this and this'*. This way of stating your opinions may be fine for social gatherings or when people are enjoying a heated discussion or argument in the pub. But not in academic writing. We do use the same word , 'argument', when describing academic writing – *'You must make your own argu-*

ment about a topic' - but 'an argument' in academic writing in Sweden stays 'cool' and the writer's language stays objective[10] . Above all, academic writing is *evidence-based*.

Evidence-based writing

Student writers must use the ideas and views of others to support their own case or to make an argument. This evidence-based writing is called 'writing from sources'. Always state exactly what the sources of your evidence might be. When you plagiarise, sources are hidden. Credit is not given. Some students do this deliberately – they try to seem more learned, more scholarly and more expert than they really are. This is cheating and teachers must report this for disciplinary action. But even if not accused of plagiarism, writing without acknowledging sources is bad practice. If you write as if words and ideas are your own when you are only a student, then your argument is not strong.

Creating a strong argument:

It takes many skills to create a strong argument when you are writing something at university. You must:

› Find good sources

This means going beyond Google to identify which sources are authoritative, which are the best ones to use etc. There are many books about how to find authoritative sources and the Library runs courses on this kind of research. This is a very important skill.

› Read sources with a certain eye

This means learning to look for evidence, to look for facts and data, ideas and examples that will support your argument. You do not read to know everything in the text. Read to find evidence to use in your own writing.

› Make notes

When you read, only some things are useful for your own writing. Find them and write them down in your own words. *All the time you read, you are asking yourself*, 'What is the person who wrote the book or article saying that is useful for me?' By writing these

[10] 'Objective writing' describes how to seem neutral or even invisible. The writer uses facts and data to make the argument instead of using emotional or persuasive language. An objective writer probably uses the passive voice and is cautious with conclusions. The objective author writes, 'The data has been interpreted as meaning….' rather than writing, 'The data proves…'.

useful points down in your own words, you are taking a crucial step towards writing about them later *in your own words*. Do not just cut and paste text or use a highlighter pen. This is a dangerous step towards using the copied text later in your own work.

› **Learn to summarise**

Your notes should be brief and very precise. Your notes will perhaps reduce a whole page of the original text to two lines – that is very skilled note taking. Practise doing this kind of summary when you read or read some books that tell you how to do it. This type of note-taking is much better if you are reading and taking notes in English and English is not your first language. Sometimes, students try to rewrite the original so it says the same thing but in different words. This is called a 'paraphrase' and probably, the new version is as long as the original and has the same ideas. This can be dangerous because too many words from the first version will probably be used in the second version and your teacher might think, 'Who wrote this – the student or another person?'

› **Keep the link between your notes and the original**

When you write, you will be putting together evidence from this place and that place and the other place. Your writing will say what you think and it will show that others think the same thing. Your writing must always say where the note or idea which supports your idea came from. This precision requires good discipline when reading and taking notes. You must keep a record of each source to be able to say later where the piece you used came from. Keep a record of sources with software or use something simple like a card index – however you do it, the rule is 'Never read anything without taking notes. Never take notes without writing down the source'.

Now to referencing

Referencing is about using a recognised system to show how, step by step, you have used sources. It is impossible be good at referencing unless the steps we have already described have been taken. You need good sources, good notes, good links between notes and sources and good ways of weaving ideas together. Then you need good referencing.

There are many books, electronic guides and on-line resources that will explain referencing systems to you. A referencing guide will tell you how the signal about others' ideas or words can be written in the text (usually, as a citation or a footnote). Guides on referencing will tell you how to collect together all the sources you have used in writing a paper in order to create a bibliography. They will explain punctuation and tell you all the tiny details about referencing. But those tiny details are not what is important.

What is important in referencing?

Show, in every case, where the words or the ideas in your text came from. Then collect all your sources together at the end. These things matter much more than whether or not to use a comma or how to reference an unusual source. Try and be consistent in the referencing system used because if you are too careless with punctuation or order, then your reader will become annoyed and perhaps lose confidence in you as a careful researcher and a careful author.

Your own words, your own work, your own 'voice'

Writing from sources takes years of practice, even in your own language. It is doubly hard to do it in a second language. But when it is mastered and you find your own 'voice' as a writer, then you will never have to worry about plagiarism and can start to take your own place in the community of writers and thinkers in your own discipline area.

Also check the sources of information listed on the guide website.

CHAPTER THREE / SIX WAYS TO WRITE ASSIGNMENTS WHICH DISCOURAGE COPYING OR CUT-AND-PASTE WRITING

Teachers want students to learn something by doing the examination and they want students to show what they have already learned in their solutions or answers. Teachers hope students will ask themselves questions such as:

- What does this assignment mean? What is it asking me to do?
- What do my lectures say about this question?
- How should I organise and structure the answer I give?
- Where should I start?

and so on. In fact, most students do start their home assignments with these sorts of questions. But a significant minority start with different questions:

- Can I do this assignment well (or well enough) to get a good mark?
- Has someone else already addressed this question / topic and if so, can I find the result of that other person's work?
- Is it worth me putting in the time and effort to do this assignment or should I spend my time on other assignments? Should I spend time doing something else?
- If I copy or if I go and find someone else's answer, will I be caught by the teacher?
- If I am caught in copying, what will happen?

and so on.

This chapter suggests how to set assignments which encourage students to compose (rather than find or fake) answers. It suggests strategies which stop students thinking along the lines of the second set of questions. Examples and cases are used to illustrate each suggestion. These examples have been collected from KTH teachers and students.

SUGGESTION 3.1.
Do not set assignments or problems that already have an existing answer

Many examination questions have been answered by someone already, long before the student tackles the question. Many problems, too, have been addressed - students know this. In fact, students say that as soon as they sense there is a pre-existing answer or solution, it can seem almost pointless to create one themselves. Teachers will increase the chances that questions and problems start students thinking (instead of memorising or Googling), if they:

› **Choose an 'action' verb for the assignment**

  By asking students to *rank, plan, alter, or invent something*, the assignment signals that there is work to be done. The same is true for verbs such as *categorise, produce, compare, select, rate or justify*. Questions which start with such words are less likely to have 'ready made' answers.

› **Avoid setting topics as questions**

  'Nanotechnology', 'genetically modified grain' and 'sustainable development' are just asking the student to find and copy.

› **Avoid questions with verbs that ask students to show their knowledge, especially in home assignments**

  Words like describe, identify, list, recount, and draw upon usually send students to Wikipedia or Google which almost do the work for them.

A question saying 'Google'	'Describe the ways in which the Swedish environmental laws are used to protect wilderness forests'
A question saying 'Google then think'	Judge the effectiveness of Swedish environmental laws on the protection of etc….'

In observed, timed examinations, words such as those above can encourage students to pre-memorise answers.

An examination passed by memorisation	Six students identified a pattern of questions and topics in past papers. They knew the exam would require 3 answers out of 6 choices. They jointly wrote ten answers and memorised them. All predicted topics came up, and all six students passed the examination.

One alternative to examination questions which are asking students to show their knowledge would be to set questions for observed examinations which ask students to use their knowledge to create an answer. The question could refer to a case, problem, situation or set of data provided in the examination paper. This way, students can show what they have learned, not just what they have memorised.

› **Avoid setting home assignments about common or 'popular' problems which are well-known in the discipline**

Questions about managing a diverse workforce, or about information security, or even about seemingly specific topics such as the impact of smoking on public health are easy to 'Google'. Even if the question is less generic, students can easily find something close to the topic and quickly shape their answer to fit.

› **Set new questions each time the course runs**

Students report no difficulty in finding answers if they suspect (or know) that the questions have not changed since the last time. This is true even if the previous work was not returned to students since most can describe easy ways to access others' assignments or to locate informal collections of past student work (and some collections are now located outside of particular universities and can be accessed worldwide).

This advice about changing the questions holds true even if the student is taking an observed examination. Teachers at KTH can tell stories of colleagues who gave students the same examination as a retake examination and then were surprised when answers came back mirroring those in the first run '… *to three decimal points*'!

A KTH student's thoughts (2009)

"[What about] cheating or extensive cooperation in hand-in appointments of the type "do/extend this program with these functionalities"? A task that is given many years in a row sooner or later gets onto a webpage is then used to figure out how to solve problems. I've done so myself when there were hour-long queues for asking the help-people. I do not consider it cheating since I understood much more afterwards, and had done some serious thinking about it before I sneaked into the solution. But still there is a line somewhere. Or is there? Sneaking into others' solutions is the quintessence of being an engineer. The most important part of real work should be to use all existing material available (the web, your friends' heads, everywhere) because that's the only way to make a breakthrough. Of course you have to ask what kinds of licenses exist, but no one constructs a program without accessing Google anymore."

SUGGESTION 3.2.
Avoid questions that make it easy for a student to copy from other students

This kind of copying between students is common if the assessment task/problem has one answer or a small number of ways in which the problem can be solved. It is best to avoid such questions. Instead, the teacher could:

› **Give students individualised data or individual resources**

An example of an individualised task	KTH students were asked to select a recent[11] article which was relevant to their dissertation topic and to critically review it. Even though students used a similar template to structure their writing, each student's paper was unique.

› **Ask students to use their personal experiences, experiments or activities to construct an answer**

[11] By 'recent', we mean since the last time the course was run as students can easily find others' examples of this task.

SUGGESTION 3.3.
Avoid questions that are generic or dated

The longer a question has 'been around' and/or the more general the question is, the more likely it is that students can find a great deal of material about it, perhaps using even the most rudimentary Internet search. Generic questions such as 'What is Boyle's law?' are obviously just asking for a Wikipedia hit but so are less obvious Google-targets such as 'What is the future for OPEC as a decision-influencing body?'' or 'How would an anthropologist analyse the European Song Contest?'

Instead of asking generic, dated or common questions, a teacher could:

› **Ask about local topics**

For example, instead of asking a question about 'waste recycling', ask about waste recycling in Stockholm or on Lidingö.

› **Ask about specific topics**

An example of how to make the topic specific

A KTH teacher is aware of the danger of letting the students select their own topics – they might just find a good resource and shape their 'interest' to that. So he asks them to select the area or general issue then creates a specific task within that area

› **Ask students to refer to recent topics such as legislation, current events or recently published material in the media or in relevant academic literature**

A question referring to recently published material

Students at the beginning of their KTH Master's were asked to select a recent media story relevant to waste reduction or recycling. After a brief description of the article (i.e. saying what it was about), students were asked to discuss the article in the light of topics they had covered in class, supporting their own views with facts and references to the text book.

- **Ask students to apply generic theories to specific cases or data**

  These could include experiments the students have carried out, projects they have done, or clients/patients they have worked with.

- **Ask students to include reference to specific texts, notes or class activities in their answers**

SUGGESTION 3.4.
Do not set assignments that require students to use skills before they have been taught to use them

Some students will just figure out how they should do their work. Some will notice, for example, how citations are used in academic texts or they will teach themselves to use certain pieces of equipment. Perhaps a fellow student teaches them a particular mathematical function or they figure out for themselves how to write a computer program. But most students need their teachers to instruct them in these things.

Students who feel the task is beyond their skills often feel they have to copy rather than write their own answer.

An example of a task set before teaching the skills	At the start of the course, a KTH teacher asked students to 'Write a critical review of two research papers'. Most of the papers came in full of copying. Students copied from the papers themselves, from other students and from lecture notes.
An example of a question set before skills teaching, designed to guide students	At the start of a Master's course, the teacher asked for a critical review of a paper. He used a template with specific instructions (*'What is the key finding in this paper'*, *'List two facts or points that support the main point' 'State four sources of evidence and say how reliable each source*…..etc).

However, the teacher needs to be careful not to create another problem – i. e. that of students copying each other. Examples in Suggestion 3.3 above address this issue.

SUGGESTION 3.5.
Do not make the assignments too hard

This is not the same as saying 'Make the questions easy'!

A question which is probably too hard	[In an Urban design course:] *Redesign the Slussen interchange in Stockholm to allow twice the number of cars and people per day to move into and out of the area at four times the current speed.*

Would students see this question as a challenge or as a threat to getting a good grade? Would the students start to make their own answer or would they start looking for someone else's answer?

Instead, you could:

› make the assignment smaller

('List the four most important aspects to consider if you were intending to increase travel etc…')

› provide more guidance to students on how to do it,

('Using the 1998 report on traffic flow in Slussen, identify three ways in which the 2008 traffic etc.')

› set the assignment as a group task

rather than an individual one so students can pool ideas and resources

› ask students to provide only an interim step

as their answer instead of the finished report, product or item. *('State three factors that any tender to redesign the Slussen traffic flow would have to include and justify your selection with reference to…*etc.')

Note: see suggestions below about ensuring students do not copy from each other.

SUGGESTION 3.6.
Make it clear in examination instructions which parts of the student's work / answer will count towards the grade

Grading criteria often state which aspects will be judged for a grade and students can usefully have these aspects drawn to their attention. For example, teachers can point out that the student needs to be focussed on the presentation and the research process as well as the discipline-specific content of their thesis since all three are considered when allocating a grade. This helps to clarify what 'work' will be assessed and therefore, what work must be the student's own.

The course syllabus may need to specify whether or not proofreading by someone else is acceptable. It may need to state who may help with, for example, locating and selecting sources or how much help from fellow students is encouraged. Conversely, the brief may state where such help should stop.

Teachers often say, 'Students should ask us if there is anything they do not understand'. However, students often say they shy away from taking such matters to teachers, assuming they should use tutorial time for 'interesting' questions instead. When asked, students describe 'interesting questions' as questions about the subject itself or the content of their work rather than how it should be done.

✱ Especially for students

Reading this chapter might be a useful way to help think about assignments, about why they are set as they are, and about how they are meant to test or encourage your learning. Some students might use the points in this chapter to analyse why a particular examination question makes them feel, 'I don't like this question!' Guidance for teachers in this chapter might help diagnose why you have a negative reaction and guide discussions you have concerning this question with your teacher so you understand why it was set in the way it was.

On the last point, making clear which parts count towards the grade; if this has not been done, do ask for it before starting the task.

This chapter suggests ways that teachers can identify plagiarism in students' work. The chapter starts by describing electronic ways of identifying where students' texts match those in databases or previously submitted student work. It then outlines 'human-based' methods of identifying plagiarism which a teacher can notice when reading or reviewing work. Human-based methods are useful for work in both hard copy and electronic submissions. The chapter concludes with a step-by-step description of how to carry out a text analysis with a text-matching tool.

It is not a question of judging whether either a computer-based or human-based methods is superior, but rather about considering how the two methods can complement each other in order to reach an assessment of a particular student's work. Remember that a software tool cannot decide if the student's submission contains plagiarism or not; this is the teacher's task. It is also the teacher's task to decide whether the case should be reported to the Disciplinary Board, a topic covered in Chapter 5.

How to use this chapter

Like all chapters in this guide, you might be starting here because you are a teacher with concerns about a particular student's work. This chapter is written so that it can stand alone. However, if you only read this chapter, you may miss the key message of the guide which is that by starting with detection, it is too late to prevent plagiarism. If, on the other hand, this chapter is a step in your course-planning then make sure to read the other chapters too.

One idea the authors have followed when establishing this guide is to encourage teachers to identify possible plagiarism early on. Early identification allows teachers to feedback to students before reporting them for plagiarism. The best way to achieve early identification and feedback is via drafts. These could, and we believe they should, be used in all courses at KTH and in all types of submissions, including lab reports, essays and theses. Checking the draft version is quick – a glance at reports to see if the student risks serious copying. This would be especially important for large assignments and high-value tasks such as theses. Then for the final version, a more thorough check is necessary.

If teachers did use drafts and early feedback, this will lead to a systematic approach to preventing plagiarism. Early feedback would also be fairer to all students, as experience shows that some will be targeted more frequently than others. Running suspected cases only through text-matching further emphasises this uneven focus on some students.

In the long run, drafts and feedback are most beneficial for the students – they learn how to do it correctly. But early detection also benefits teachers since cases which are found and fixed in the draft stage do not have to be reported to the Disciplinary Board.

4.1 What is a text-matching tool?

Text-matching software is often referred to as 'a plagiarism detector' or even as 'plagiarism prevention tools'. However, no software tool can judge whether a text submitted is plagiarised or not; only the teacher can do this. The tool itself cannot prevent plagiarism, even if its use may dissuade students from attempting it. Specialist software for plagiarism is more correctly called a 'text-matching tool' and we use this terminology throughout this guide. The guide website offers detailed instructions on how to use Urkund, the trade name for one of these tools. Here, we describe how all such tools work and what they are capable of doing for teachers and students.

How text-matching tools operate

The student submits his or her work electronically – at KTH, this usually means uploading it through BILDA. (See the guide website for guidance on alternative methods). The tool takes the uploaded digital text and first removes all pictures (including any equations which are stored as pictures) and strips out the formatting. It then creates sections of text roughly 40 characters long. (Note: the exact size is unknown and it differs from tool to tool). Strings of text from the student's text are then compared with text from different sources. This is similar to what a teacher does when a text is suspected of plagiarism and the teacher 'Googles' a part of the text and in some sense, the tool can be compared to a 'multi-Google search'. However, the text-matching tool quickly submits all of the text in sections, makes the comparison to more sources than just the Internet, plus it allows the teacher to upload all of the texts submitted in a course, all at the same time.

❋ Sources inspected by text-matching tools

All tools which are commonly used in Sweden, whatever their name, check for matches in

- the Internet
- previous submissions to the same tool
- some closed databases

Because different tools access different submissions and hold a different closed database, different matches (and different misses) will occur. None will find everything. One UK study[12] tested one tool, called Turnitin ©, and found that on average, Turnitin identified about 50 % of the instances of copied text in controlled challenges. Researchers have been regularly comparing the various tools which are currently in use and have noted variation in accuracy of identifying the location of a source, in user-friendliness and in versatility[13].

How text-matching tools search the Internet

All text-matching tools will rely on their own searching and indexing programmes and all of them try (and, of course, fail) to keep up with the rapidly expanding Internet. Each has an algorithm for deciding which sites to check and how deep within a site to explore. A tool's ability to match what's on the Web is only as good as the text fragments, keywords and archived sites which it stores in its database. All tools continuously redo their indexing, in line with usual practice for meta-search engines, and all exclude 'common phrases' to avoid creating irrelevant matches.

The important point for the user is to remember that not all Internet matches within an individual student's work will be found, and that the matches that are found will be different on different occasions.

How a text-matching tool searches previous submissions

When a new student text is submitted to a text-matching tool, it can be indexed and stored in a separate database which is specific to that text-matching tool. The user (which usually means the teacher) must tell the tool whether a submission should be stored or not. The database allows all students' submissions which go into it to be compared to submissions from previous years, in other courses at KTH and at in any other university using that tool. If a teacher does not want to save a submissions, for

[12]Introna, L., Hayes, N. Whitely, E. and Timm, A., (2007) "Inside plagiarism (copy) detection systems", International Students, Academic Writing and Plagiarism Conference, University of Lancaster, Lancaster UK, 6 September, 2007.
[13]One example is a study by Webber-Wolf, D. (2008) , On the utility of plagiarism detection software, 3rd International Plagiarism Conference, Northumbria University, 23-25 June 2008.

instance if it is one of several drafts, then the guide website describes how this is done.

Teachers can usually only see the date and place where any matching text was located. A specific request to see the submission is necessary and may not be granted by the original student's teacher. This arrangement safeguards the copyright exemptions that are allowed when archiving students' work. Since different text-matching tools do not exchange their databases – to do so would remove their claimed competitive advantage over rivals – then, if KTH changes text-matching tool, all previous submissions will no longer be available.

How text-matching tools search closed databases

All text-matching tools will have negotiated access to some closed databases but they will not have access to the majority of sources used by students since they do not, as a rule, pay subscription fees. This means that students registered at KTH can access material through the Library which our text-matching tool cannot. Companies market themselves as actively pursuing package deals with copyrighted sources and journals. The sources themselves are becoming more interested in placing their material in these companies' databases because their editors are worried about plagiarism in scientific articles.

✱ Sources unavailable for text-matching tools

Tools cannot access many of the sources that students will be using. These include:

- copyrighted material
- printed books
- text that is translated from other languages
- previous submissions to another software system

Copyrighted material

Text matching tools cannot access most electronically stored scientific journal articles which the students have access to through KTH Library subscriptions. A few articles are on the author's home page or are published in arxiv.org – a situation that can sometimes give plagiarising students an unwelcome surprise.

Printed books

Most printed books are not available electronically on the Internet and older books have no electronic version though Google's ambitious scanning programmes may change this in future. Manual searching methods are probably the only recourse for locating most books.

Text translated from other languages

If a student translates parts or all of a text, this would not be identified since no tool offers translation facilities and no company would support the vast database needed to store all relevant languages.

Previous submissions to another software system

Some teachers almost seem to believe that a collected corpus of students' previous work accumulates automatically. Of course, this is not the case. If submitted student material is not regularly scanned into a text-matching tool, or resubmitted when and if a new tool is used, then it can not be matched against new submissions. Teachers are advised to keep their own electronic archives of student work.

❋ Identifying the source text following student alteration

Students can plagiarise by taking others' ideas as well as by copying others' words. Taking others' ideas becomes plagiarism if the student does not acknowledge the source. However, text-matching tools can only find words whereas human readers might spot unattributed, paraphrased student text.

A few students may exploit the limitations in the software. Strategies which have been discussed amongst those interested in such deliberate cheating include:

- deliberately misspelling words
- adding grammatical errors
- inserting white citation marks around the entire text which would be invisible in the printed version but which the tool would read as an acknowledgement of the source [not all tools make this distinction]
- replacing some characters with others that look alike but have different character codes. Again, this alteration would be invisible in the printout but would appear when inspecting the formatting. There are now programmes which can make these changes, probably created as a direct result of the 'market' created by text-matching activities.

The student may also have used one of the many companies which sell work such as essays and even dissertations. These are largely for English texts but some Swedish providers are appearing[14]. Commercial providers promise 'original work' and where this is true, the result will be submissions which appear acceptable to text-matching software. However, since purchased work is not written by the student, handing in such a submission would be a serious attempt to deceive. Since detecting this type of attempt to deceive is unlikely, the case is strengthened for managing the process by which it was 'written' (sic). Teachers can do this by any of the measures outlined in Chapter 2. These include asking for drafts and checking authorship via discussion. However, students need to be forewarned if either is planned and it is probably best to use these methods with all students in order to be fair.

A final word about using text-matching tools

There is much in this chapter about the limits of text-matching tools. This is because many teachers have unrealistically high hopes that they will solve the issue of plagiarism. Yet, despite their limits, there are still good reasons for using them. It saves time by weeding out the worst cases of blatant copying. Though students can take steps to evade matches, 'good' cheating takes time and cancels out the reason many students resort to cheating which is their lack of time. Using text-matching to compare texts also makes sense in a large class where several teachers share the grading duties. That is when such tools really come into their own.

4.2 Using manual detection methods to identify plagiarism

If a text is plagiarised, then a good teacher often suspects this at the first reading. This section describes how teachers can work with and augment electronic detection, combining the strengths of both systems.

✱ Cases that the teacher can find when text-matching tools cannot

When students use books or copyrighted material incorrectly, teacher comparison with the original might be necessary. Teachers often start by checking the course literature, both current and in previous courses, and checking articles mentioned on the course home page. Another place to look is in the student's own bibliography as they can leave clues in the references. Some students even copy from a book written by the teacher! Commissioned texts from commercial providers are tougher to spot, although the teacher may react to style variations or unexpected improvements in language. Translations, too, are tricky although it might help to use Google's translation service (http://translate.google.com does many languages) on a selected fragment and see what you can find –

[14]For example, the site http://www.essays.se/ describes itself as '…a digital resource which enables you to search and download thousands of English-language university essays from Sweden. What are university students in Sweden writing their final theses about? Here you will find out.' The site says their essays are free and it is linked to the National Library of Sweden. Swedish version at http://www.uppsatser.se/ . To find examples of English sites, just google for "buy essay" to see the large market.

though you will probably also need to consult someone proficient in the foreign language to compare texts.

❋ These are suspicious signals - but more proof is needed

- layout changes
- language changes
- a level of written language which is different from the student's oral performance
- the editing history of the document
- strange or variable references
- an answer to last year's questions (!)
- a fully finished work with no evidence of the writing process
- a sense that "this sounds familiar"

Layout changes

If the student has copied and pasted the work, then fails to reformat the new document, then the teacher might see signs such as font changes, the text moving between fully justified and left justified and Internet links remaining in the text, perhaps in grey. Caution: None of these things on their own constitute 'proof' as each could have an explanation in line with acceptable (though sloppy) writing practices. But they do show the need to check further.

Language changes

If, as a teacher reads the text, he or she finds one paragraph in perfect English and the next with three mistakes per sentence, then it is likely that different people wrote them. Other signs are a mix of American and British usage and inclusion of words which are likely to be beyond the student's vocabulary.

Caution: The work can be created by piecing together other's text because the student misunderstands what is expected – in that case, it is plagiarism but it may not be attempt to deceive.

A level of written language which is different from the student's oral performance

A student who can hardly understand a teacher's questions may hand in work in complex English, even using words that a Swedish teacher who is reading the result needs to look up in the dictionary. If the same student is asked about the work, she may answer with incomprehensible English.

Caution: This happens because in some countries, students only learn and practice some skills – typically, reading and writing – and neglect oral skills such as listening and speaking. Some may learn oral English from a teacher with non-standard pronunciation. One idea for a teacher who encounters a major difference in language skills is to ask the student to write a supervised text to check their capability. (Do watch during the writing.)

The editing history of the document

A reader who becomes suspicious of authorship can check file formats to see if they are consistent. In Word, this is done by using the 'Properties' function found under the 'File' button. Properties shows the editing statistics, including date of creation, the editing time and the number of saves. A check which shows the student has spent only a few minutes creating the work and/or has done so in a single session, could indicate a cut-and-paste job.

Caution: Formatting variations have many explanations but do suggest further investigation.

Strange or variable references

Teachers report asking themselves questions such as: Is the student using books or journals which are not available at KTH Library? Are there no recent references at all? If the topic is familiar, can I see references which have been fabricated, or had their date changed? Also, does the reference style change in the text, perhaps pointing to cut and paste?

Caution: Strange references do not prove the work is not the student's own. It could lead to a request that the student to bring in the cited sources or prompt a search for them by the teacher.

An answer to last year's question (!)

This may seem incredible but if the task is only slightly different from last year, a student may not notice and may hand in work copied from the previous year's students. A teacher can immediately spot this but to document the copying, access to the electronic archive of last year's work using "Windows search", or submitting previous reports and the recent resubmission to a text-matching tool will confirm the source. If one student's action is crude enough to alert the teacher, then this kind of wider inspection often identifies others who have done the same but who have hidden it more skilfully.

Note: Preventing resubmission of old work is a strong reason why teachers should routinely set new tasks every year.

A fully finished work with no evidence of the writing process

If the student hands in a longer piece of writing such as a thesis at the last minute, perhaps even the day before the oral presentation, but the submitting student has not been observed doing the work and has avoided interim steps such as submission of drafts, then the teacher has cause to be very suspicious. Teachers who have experienced this kind of behaviour say the likelihood is high that the work is not the student's own.

Note: Teachers need to ensure there is an adequate gap between the hand-in date and any oral defence. This will allow the teacher to inspect the written submission and to authenticate the authorship if necessary.

> *For a Master´s thesis, and for any work where no drafts have been reviewed, this is especially important*

A sense that "this sounds familiar"

This is one of the teachers' most powerful tools. Since the teacher knows the field, once suspicion is triggered, the student could be in trouble. Some teachers even seem to take up the challenge of locating the original and for a few, there seems to be no limit to where they might look. The next section provides some of their strategies.

✱ Some ideas if a teacher thinks, *'Where does this come from'?*

A text-matching tool may completely 'clear' a text yet reading it raises suspicions. Here are some ideas for further checking suggested by experienced teachers:

- check references!
- figures and equations?
- discussion

Check references!

Can you find them in your library? Have they been falsified to make locating them difficult (such as a changed date, or even evading location at all, implying they are fictitious)? If textbooks are cited, check the index then look for relevant sections which may be copied verbatim. Where a student lists Internet links, the url may only refer to top-level sites whereas a deeper search may reveal key sentences or even downloadable documents. Many times, students will not have used the whole article but have copied the publicly available abstract or segment and the same can be easily found by the teacher.

Figures and equations?

Look at the figures and equations in the work submitted. Figures are not compared at all by text-matching tools, and some equations are also included as pictures rather than typeset text. Sometimes it is possible to recognise a figure and if the source of this figure is not included among the references, this is a prime candidate to check for copying. Figures from references which are included, but which are copyrighted sources, are also clues. Read or Google the text surrounding the figure to see if it is copied.

Discussions

Ask the student questions about the work as students who have not written the work themselves usually experience difficulties in talking about it. Either ask for more technical details or about the process of writing, like why did you select these references? Asking for a draft is another way of authenticating the work. However, take care that you are not acting in ways that threaten students' rights to fair treatment. Telling students you might do this at the start of the course is important as is being clear why a discussion with any one individual student can be justified. Make sure it is a chat and not an 'investigation' as then the student will have different expectations and rights. This is an action that requires careful forward planning.

4.3 Six steps for systematic use of text-matching tools

The guide website includes screen shots and step-by-step guidance. Here, the overall principles for efficient use are listed. This will not tell you how to use the tool, but it will tell you how to use it efficiently.

There are six steps in using a text-matching tool. The sixth step is only used if plagiarism involving attempt to deceive is suspected and therefore involves a report to the Disciplinary Board. Often steps 3, 4 and 5 are iterated.

1. First “submit it”
2. The tool will “match it”
3. The tool will “summarise it”
4. Then “show it” in a report
5. You “edit it”
6. You “report it” or “grade it”

Step 1. Submit it

It is up to the teacher how the texts should be submitted. Most tools support the following options:

- all students e-mail their work to a specific mailbox set up by the teacher
- all students submit their work on a specific web page set up for the course
- all students submit via BILDA which performs an automatic check
- teachers check an individual submission in BILDA or on a web page

This one is useful for theses

Step 2. Match it

The tool does this and the first part of this chapter explains how this is done. Some tools may not respond immediately, and the delay may be significantly longer at the end of terms. Some tools work overnight. Check the typical period needed before setting the deadline for submission so that there is enough time for text-matching to take place.

Step 3. Summarise it

The text-matching tools summarise the amount of copied text calculated as percentage of student text, sorted in order of amount of text. Several hits on the same text should be added together. Examples of the result are seen on the guide website for some common tools. When presented with all the reports summarising matches, sort them quickly into high percentage of matches where a check needs to be made and small percentages of matches that can be dismissed. Then only examine the highest percentage matches in detail. Note that the bibliography can be a significant contributor to the total percentage of matched texts. Some tools offer the possibility of excluding the bibliography and this may make a difference when deciding which submissions, if any, need more attention. Also note that some apparently high overall percentages may be the result of compiling many small entries. Forty or fifty matches of <1% entries can look as bad as a 45% total but are, in fact, a perfectly legitimate writing strategy for that task in that discipline.

Step 4. Show the details

For pieces of work where high match percentages were found and where the matches identify cause for concern, then the next step is to ask the tool to display the student's text and the identified original source text side-by-side. The tool marks the sections where such a comparison would be useful. Note that the texts are displayed unformatted, which may cause equations to look strange and which will exclude figures. Where a significant segment of the student's work is matched to a particular source, it is a good idea to download and save a copy of the original text. You do not need to make copies of all matched sources; minor matches to unrelated texts can be dismissed.

Step 5. Edit it

A good text-matching tool should allow you to suppress irrelevant hits like one-liners and discount the bibliography in the final summary and report. Sometimes this weeding and discarding must be done hit-by-hit. In some tools, if a draft version has been indicated, the text-matching job must be re-submitted manually asking to remove the draft from the match. Resubmission may take an additional day.

Step 6. Report it (or Grade it)

In Chapter 5, reporting is discussed in detail. Here, the basic point is that your information to the Disciplinary Board must be in a format that will allow a non-expert to judge how much of the student's text is copied without attribution. Some text-matching tools can generate a report on unformatted text which runs to 50 or even 100 pages. The ideal report would be one which compares the source in its original format so that pictures and equations are matched as well. This may have to be done manually, but teachers who have done this say that the electronic report is some help. It is usually sufficient to include only the large percentage matches.

The next decision is important: either report it or manage the incident yourself. There is no third option (such as putting it on a shelf and doing nothing). If there is not enough proof to support a report to the Disciplinary Board, then correct the report fairly. Be careful that your decision to mark a student down is based on evidence. A grade cannot be reduced due to a suspicion of cheating.

Actually using the tools

The tools currently offered by KTH are listed on the KTH Library site under "Teacher tools". Access is described here in various manuals and films. Some schools or departments may have other tools available too, so check with your local plagiarism administrator. See more details on the guide website.

4.4 Examples of cases detected by text-matching tools

Entire report matches (> 90 %)

This could be a lab report, where only the name on the front page has been changed. Check if figures and equations also match.

Caution: has the text been previously tested by the same text-matching tool regarding the same student? For instance as a draft (then matches would be OK) or in another course (then matches are not OK, referred to as self-plagiarism).

> *Students cannot submit the same work twice and expect to have credits awarded each time*

Entire report matches (> 50 %) involving a single source

Find the source and print it for comparison. Check if there are search-and-replaced keywords (like the word 'Toyota' changed to 'Volvo' or 'Angola' to 'Zimbabwe'). These would indicate an attempt to deceive. Reference dates could also have been changed (such as cases where students have added four years to all references in an old report). This is evidence of attempt to deceive. Also, reports involving attempt to deceive are usually handed in late or at the last moment, with no drafts available.

Note: Any or all of these actions are not uncommon in thesis reports.

Entire report matches (> 50 %) involving several sources

These mix and match reports are sometimes trickier to identify than those involving a single source, but they do give colourful displays in several text-matching tools. The report can show that the student has nicely spliced together sections of text, perhaps even providing a student-written introduction and/or summary. Results can be copied or original.

Caution: Students who submit this sort of text may claim "this is my own work" as they see this cutting and pasting as legitimate. Chapter 5 discusses how to manage such cases.

Some parts are copied (< 10 %)

This may be a student misunderstanding and is usually easy to spot – hopefully early on in a draft version. In-text citation markers might be used but not in a way that reflects the copying. For example, the student may have placed a citation marker at the end of a paragraph or even after several paragraphs (a number in brackets, often the same for several paragraphs).

Caution: The student may claim no attempt to deceive since in-text citations are there, even though used incorrectly.

False indications (> 1 %)

Incorrectly marked citations (for example, missing citation marks) or block citations marked by indented text or italics may have been flagged. If the student has otherwise indicated in the written text that a citation has been used, then this is clearly not plagiarism. Sometimes the student copies part of the text from the question.

Caution: Lab reports with very little text can sometimes be very similar after pictures and equations are removed. Always check the actual student report.

False indications (< 1 %)

A correctly written reference to a source in a bibliography will naturally cause text-matches (but of less than 1 % each), and several of these can add up. Some text-matching tools allow the bibliography to be excluded in the summary. Portions of sentences with general text can match irrelevant sources.

4.5 Especially for students

After reading this chapter you may be worried about being accused of plagiarism in your work. Here are some comments designed to help judge whether or not your worries are justified.

What kinds of questions are you asking about plagiarism? If, like many students, you are asking, “How much of the text must I change so as not to be accused of plagiarism?”, then perhaps you should worry. This question signals a high-risk approach to writing. Instead, your writing needs to happen without directly looking at the original text. Your notes and summaries of what sources say should mean you are able to write in your own words.

Perhaps you are asking, ‘Must I completely stop cutting and pasting text from the Internet?’ Again, wrong question. Of course you want to cut and paste things from the Internet. The question is what you do with this text. It may be only for reference, not for writing. We suggest you create a separate file called cutnpaste.doc or something similar so that you do not accidentally end up with copied text in your work.

Another good habit is to keep track of the references from the start. If you plan on using more than a handful of sources – say, more than 10 references - then it is worth your while to learn to use Endnote or Bibtex to handle your bibliography. Specialist software also simplifies switching between referencing systems if you wish to use the same sources in another context.

Finally, none of your questions about plagiarism should be about the referencing format. A departmental guide or a standard document can answer these questions. However if the format and layout of your references are wrong, you will not be accused of plagiarism. That is an honest mistake. But do try and be consistent about where you put commas or whether or not the title is in italics etc. Check out some examples of how it should be done.

CHAPTER FIVE / POLICIES AND PROCEDURES FOR MANAGING CASES OF STUDENT PLAGIARISM AT KTH

This guide stresses all the ways that students can be educated and persuaded away from plagiarism. However, it is inevitable that some will submit work that is not their own. Some will do this deliberately as an attempt to deceive the person marking their work. Others will plagiarise without realising they have breached KTH rules.

All actions at KTH operate under the requirements of the Higher Education Ordinance. Relevant sections of Chapter 10 in the Ordinance regarding disciplinary measures are cited in Chapter 1 of this book and states: *If there is cause to suspect an attempt to deceive, the vicechancellor*[15] *shall promptly be notified.*

This chapter explains how all cases of plagiarism are managed at KTH. It also explains the responsibilities of students, teachers, administrators and specialist known as 'contacts' with regard to plagiarism.

5.1 Responsibilities for managing plagiarism

Contacts: their role at KTH

Each KTH school has nominated a person or people to act as a point of contact for any teacher who wishes to discuss disciplinary issues. Contacts should work proactively with others in the school to develop good practice and to spread information about how best to deter students from plagiarism. Contacts also disseminate information from the KTH Administration to teachers and students within each school. As a group, contacts are charged with advising KTH on how to ensure that KTH rules are efficient and legally sound in order to manage disciplinary matters.

See the guide website or ask the KTH Legal Section in order to identify the contact in your school.

Student responsibilities concerning plagiarism

Students need to pay attention to any information they are given about examinations. This could be in the form of guidance before examinations (written and/or

[15]The translation states "vicechancellor", which should be Vice-chancellor (UK) or President (US) as the equivalent for rektor in Swedish. We will use Vice-chancellor in the following.

oral) and/or as feedback as they proceed with a home assignment task. In accordance with a decision 2008 by the National Agency for Higher Education[16], students must ensure that they understand any feedback given to them by teachers and where they do not, they should seek further guidance.

Once students know what is expected, it is their responsibility to follow instructions and to ensure their work is an honest reflection of their own efforts. Of course they should draw on sources and on others' ideas and work as appropriate. Where they do so, they must acknowledge the work of others using methods which have been chosen by their department.

Students should take care to protect the integrity of individualised assignments by not, for example, sharing final drafts with other students in formats which make copying easy. Where students cooperate with others and where this cooperation makes a significant contribution to the final result, it must be acknowledged. In cases where work is stated to be an individual task or a task which should be unique to a specific group, then students must take steps to comply with the requirements for individual or group work respectively. By attending to this issue, students need not forgo the obvious benefits of discussion and debate amongst fellow students, however if they are unsure when cooperation might become unacceptable copying they should consult their teacher for further guidance.

Teacher responsibilities concerning plagiarism

These are described throughout this guide. In summary, teachers should:

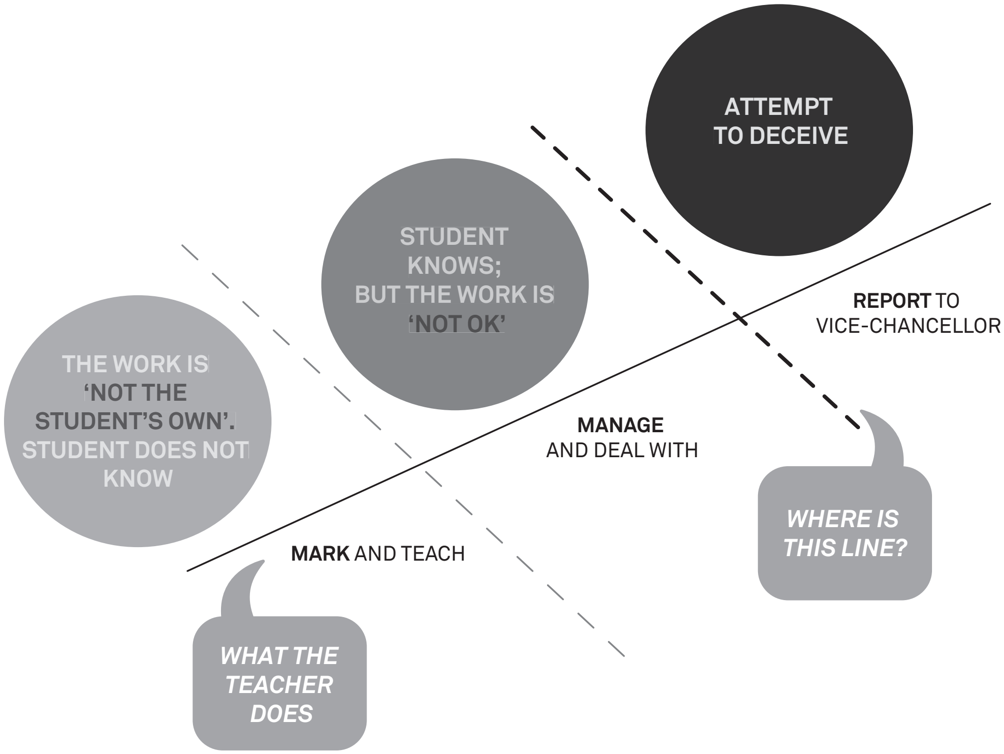
- design programmes and teaching activities that ensure students have sufficient knowledge and understanding to avoid plagiarism (Chapter 2)
- design assignments in which students can show their individual understanding of the learning points being examined (Chapter 3)
- use a range of detection strategies to identify instances where students submit others' work as their own without sufficient acknowledgement (Chapter 4)
- follow KTH procedures for dealing with cases when they arrive – the purpose of this chapter

[16] Högskoleverket 2008-01-08, reg nr 31 -2456 – 07

Teachers will manage plagiarism on a case-by-case basis depending on the circumstances. However, though each case is unique, their management needs to be consistent across the university. KTH is taking measures to improve consistency in how cases are managed and to treat each case fairly.

The figure below outlines how teachers must decide the type of management that is appropriate for different levels of plagiarism.

Teachers' responsibilities are summed up in this diagram



On the left, the lowest level of plagiarism, the student submits plagiarised work but the student is not yet aware of his or her responsibilities to acknowledge others' work and words. In these cases, the teacher must mark the work down to reflect the plagiarism and continue to teach the student how to correctly acknowledge others' work.

At the middle level, students are aware of what they should do but do not yet comply with the requirements to acknowledge others – perhaps they do not follow referencing conventions or perhaps they cooperate too closely with fellow students. These middle level cases must be managed within the programme following guidance given below. The important point is that there is *no cause to suspect the student has made an attempt to deceive.*

The question 'Where is this line?' indicates the demarcation between plagiarism with reason to suspect an attempt to deceive and plagiarism without reason to suspect an attempt to deceive. The line is not easy to identify. There is detailed advice later in this chapter on how this should be done. Here, the important point to make is that *only in cases where you have cause to suspect an attempt to deceive must you report them to the Vice-chancellor.*

To summarise, teachers must deal with all cases of plagiarism. How teachers manage cases will depend on their location on the sliding scale of severity illustrated in the diagram.

5.2 Managing cases of plagiarism

Managing low level plagiarism

Throughout this guide, the point has been made that students find it difficult to understand what they are expected to do and how they should follow the rules when doing their work. It is up to the teacher to judge whether the students have had sufficient opportunity to learn. If this is not clear, there is further guidance on this point in Section 5.4.

Consequences for plagiarism should reflect the student's level of understanding and the seriousness of the offence. In general, for the lowest level, the grade should be reduced to show that learning outcomes have not been met. It may even be the case that an F or Fx is given to require the student to correct the work and to indicate that insufficient work was done by the student to enable the teacher to judge the student's learning.

Students who are plagiarising at this level will need clear, detailed feedback on how they should do their work in future. This could include individual guidance but is more likely to mean directing students to sources such as the Library, pre-written instructions on referencing and citation, or instructions on cooperation with fellow students. Much of this information can be found on websites and sources suggested on the guide website.

Managing serious plagiarism where there is no reason to suspect attempt to deceive

If a student knows what is expected and does not comply, then teachers need to take this seriously. The next section suggests possible action. Since it is important that cases of plagiarism where an attempt to deceive is not suspected are managed consistently within a department or school, teachers are advised to talk to the appointed contact in their school to ensure they act in line with colleagues. There is detailed guidance in Section 5.3 below to help teachers decide whether or not a case falls into this category of plagiarism.

Action concerning plagiarised work with no reason to suspect attempt to deceive

In all cases, the student's mark should be reduced to show that the work does not meet the learning outcomes. In most cases, additional action such as those listed below is warranted. Depending on the severity, additional action could include:

- an interview with the teacher. This is to ensure the student understands what is incorrect and the consequences of continued failure to present 'true' work

- an interview with a specialist such as the Contact or the Head of Department. This ensures the student understands what is required and knows what will happen in future as a result of this type of work. A record of the interview can be kept and a copy given to the student

- fail the work Fx and require correction. This option can be taken in cases where, if the course plan had been clear regarding plagiarism, students would have been reported for disciplinary action (see section 5.4 below)

- fail the work F. This forces the student to redo the assignment

Recording plagiarism in cases without suspicion of attempt to deceive

The school should keep a record of what penalties have been imposed and the grounds for these. This allows, over time, a check to be made on the consistency of decisions and will also help the school to identify whether further action is needed.

5.3 When to report cases of plagiarism

Plagiarism with reason to suspect attempt to deceive must be reported

The person who is assessing the student's work must be able to make a true judgement of the student's learning, based on the work which the student has submitted. If the student attempts to deceive the assessor by any means, then this must be reported.

How to decide if suspected attempt to deceive is involved

This section sets out the criteria to use to decide whether or not to report a student *for suspected attempt to deceive*. When a case is reported, the KTH Vice-chancellor then takes over management of the case. Section 5.5 below describes what happens. Here, the focus is on whether or not to report a case and the guidance here is only for teachers who must make this decision. The Vice-chancellor or Disciplinary Board makes a judgement based on all relevant facts, and they decide whether an attempt to deceive is involved.

Decisions about disciplinary matters are sometimes very complex. Your school contact is a good place to start for further advice or support in deciding if there is cause to suspect an attempt to deceive. Contact details for all contacts are available on the guide website.

Important: if, after following the guidance below, you decide that a student should not be reported for suspected attempt to deceive this does not mean that you should take no action. Cases of plagiarism without reason to suspect attempt to deceive must be managed within the programme using procedures described in the previous section.

When a case of plagiarism MUST be reported

Always report cases where you suspect the student has handed in work which shows a *deliberate attempt to deceive the assessor* or to create a false impression about the integrity of the work.

There is no option in cases of suspected attempt to deceive – they must be reported.

Cases of suspected attempt to deceive will be judged by the continued disciplinary process and can only be found proven if there is evidence:

- that the student was informed of the requirements for this piece of work
- that the breach constitutes a threat to the work's integrity
- that there are facts to support the attempt to deceive

If you are unsure of any of these aspects, please consult your school's contact who is delegated to offer advice on such matters.

Four things that strengthen that a suspicion of attempt to deceive should be reported:

1: … if the student has been previously given a caution or warning about similar behaviour in a similar context

2. … if the student has received feedback about unacceptable practices or breaches of academic rules

3. … if concrete evidence supports the accusation

4. … if the rules for the assignment explicitly state how and in what context they must be applied

Each of these criteria is illustrated with examples in the following pages. Examples show how that a criterion is met or not met in each particular case.

EXAMPLES OF CASES APPLYING THESE CRITERIA

> **A case of suspected attempt to deceive should be reported if** the student has been previously given a caution or warning about similar behaviour in a similar context

YES, the student has been given a similar caution	The student is warned in Term One against copying other students' computer codes and then submits code in Term Two that is clearly copied from another student.
NO, the student has not been given a similar caution	The student has previously been warned about cheating on a maths test and now has submitted inadequately referenced text in a project report.
YES, the student has been given a similar caution	The student has been warned about using help from other people to write up project findings and then uses someone else to write up the research findings in his dissertation.

YES, the student has been given a similar caution	The student has had a previous case found against her for cut-and-paste plagiarism and she has now submitted an essay which she paid someone else to write on her behalf.
YES, the student has been given a previous caution	The student's draft work was plagiarised and the supervisor told the student 'This is plagiarised' [17] and that the student to fix it.

A case of suspected attempt to deceive should be reported if it can be shown that the student received feedback about unacceptable practices or breaches of academic rules

YES, the student has received warning feedback	The supervisor's feedback was that the student must rewrite chapters paying specific attention to referencing conventions and suggested how to seek guidance. The student's final text has only numbered footnotes. There are no quotation marks denoting word-for-word replication of others' text. A significant amount of the text is word-for-word copy without any marking of the source.
NO, the student has not received warning feedback	The student's supervisor told the student to 'fix your citations' and the student retains the draft version which shows this is the only guidance provided. The final text contains numbered footnotes but no citation marks.

A case of suspected attempt to deceive should be reported if concrete evidence and facts support the accusation

Yes, there is concrete evidence of an attempt to deceive	The student's dissertation matches exactly a previously submitted dissertation for 95% of the text. The student has rewritten the introduction and conclusion only.

[17] Note: the actual phrase, 'This is plagiarised' must be used so there is no doubt of the message.

NO, this evidence alone would not constitute concrete evidence of an attempt to deceive	A student who is being disciplined for copying says, 'Four of my class did the same'.

The case of suspected attempt to deceive should be reported if the rules for the assignment explicitly state how and in what context they must be applied.

This explicit explanation needs to be in the course plan and needs to be written like the examples on the guide website.

5.4 Cases which should not be reported for disciplinary action

As the previous section stated, cases of suspected deliberate attempt to deceive must be reported. However, cases are often not clear-cut. In this section, we list factors that suggest you should not report cases for disciplinary action. As stated in the previous section, *weigh up all these factors* and if you are unsure, do seek advice from your school contact.

Factors to consider when deciding not to report a case:

1. Has the student been informed about the rules governing the examination in question? If not, then the case cannot be dealt with under the disciplinary process. You are advised not to report such a case but instead to deal with it within the programme.

2. Disciplinary cases cannot go ahead if there is no supporting evidence for the claim that the student has attempted to deceive. Do not report them.

3. Cases cannot proceed to the Vice-chancellor where the instructions for the examination do not include information relevant to how the guidance should be applied in the specific task. If the guidance given to the student does not apply to this type of task, then return to Point 1 in this list.

4. Do not report work that the student has submitted for feedback or guidance only. Only report finished pieces of work for disciplinary action. If unacceptable work is submitted for feedback, the teacher should manage this within the course.

5. Do not report breaches of the Ordinance which are so minor or unimportant that the integrity of the work itself is not in question. There are examples in the next section of this point.

6. Be very careful about reporting students at the start of their programme since one of the requirements for disciplinary action is that students understand KTH expectations. It is assumed that students need time to learn what is expected.

Examples of factors to consider when *not reporting*

These are examples of cases which illustrate whether or not the factor is demonstrated. Examples marked 'YES' show that the example meets that requirement and this is a step towards the case being suitable for reporting. Examples marked 'NO' show the point is not made and in that circumstance and in that case, disciplinary action is not likely. *The 'yes' and 'no' comments are NOT advice on whether or not to report the case. Make this decision after considering all the circumstances.*

> Cases where the student has not been informed about the rules governing the examination in question cannot be dealt with under the disciplinary process. Do not report them.

How can you tell whether the student has been informed?

1. The information given to the student relates to the *type of assignment* which is involved in the example you now under consideration.

YES, the student has been informed	This case deals with 3 students who copied from each other when writing a programme. It is possible to demonstrate that students have been told about how much help they can use when writing a computer programme.
NO, the student has not been informed	This case is about a student who had too much help with her essay. Her only previous guidance was about receiving too much help when writing a computer programme.

2. The information which has been given to the student is *relevant to the violation*.

YES, the information is relevant	The student attended a seminar on referencing skills. This case deals with unacceptable referencing.
NO, the information is not relevant	The student attended a seminar on referencing skills for all students. The case deals with an incident where three students copied from each other in a laboratory report.

3. The information given to the student was in *a form that is difficult to avoid*.

YES, the information was difficult to avoid	There was a planned and scheduled series of lectures and seminars in the first semester of the programme on topics relevant to the assessment task.
NO, the information was easy to avoid	There was an optional workshop where the information relevant to the assignment was provided to those students who attended. There was no attendance record.
YES, the information was difficult to avoid	The programme required all students to complete an online course which informs them about how examinations will be carried out before they submit their first assignment.
NO, the information was easy to avoid	The information about how the assignment must be done is in course information only and this information was only given out at the first lecture of the course.

4. You can point to *when* the information was given to the student.

YES, the time is known	You are able to say the time and place when information about plagiarism was given.
NO, the time is not known	You assume that students had the information about plagiarism already from a previous course or previous experience.
YES, the time is known	You can point to where in the course documents this information about plagiarism has been given.

NO, the time is not known	You say, *'The students should know about this by the time they come here to KTH to study'.*
YES, the time is known	The student submitted draft work and the teacher wrote 'This is plagiarised' on the work. The teacher said the work was unacceptable because of plagiarism and explained in the tutorial how the work must be fixed for the final copy.

Disciplinary cases cannot go ahead if there is no supporting evidence for the claim that the student has attempted to deceive. Do not report them.

This requirement reminds you that you need to have more than a 'feeling' that the student has tried to cheat or to create a false assumption. Evidence must be seen to be free of bias and to be collected in an impartial manner.

Here are some examples of the kind of evidence that would and would not support a claim of cause to suspect an attempt to deceive.

YES, there is supporting evidence	When you look at the report, you see that the student uses referencing citations such as quotation marks correctly in most of the text. However, in the one section the student copied directly from Internet without marking the source, there are no marks to show that the student's text is a copy.
NO, there is no supporting evidence	The claim for cause to suspect an attempt to deceive is based on a report from someone who wishes to remain anonymous only.
YES, there is supporting evidence	The claim for cause to suspect an attempt to deceive is based on the student changing the copied, unattributed sections to make them seem genuine. He changed the word 'we' to 'I' throughout and changed the name of the country where the alleged project was implemented.
NO, there is no supporting evidence	The student belongs to a particular national group where copying is believed to be a frequent problem.

YES, there is supporting evidence	The two students who are assumed to have copied from each other made identical errors which relied on identical misunderstandings of the task. This is a misunderstanding that you as a teacher have never before encountered.
NO, there is no supporting evidence	Both students who are assumed to have copied have made very common mistakes. You as a teacher see these sorts of mistakes often.
NO, there is no supporting evidence	The teacher assumes, based on past experience with this student, that the student is always trying to get away with doing the least work possible and here, has slipped below the threshold.

Cases cannot proceed to the Vice-chancellor where the instructions for the examination do not include information relevant to how the guidance should be applied in the specific task. Do not report them.

YES, the guidance is relevant and specific to this task	The written instructions state the work is an individual task. They also state that students are encouraged to share ideas and discuss their findings orally but not to exchange documents, either in hard copy or electronically. Two students submitted nearly identical texts.

For ideas on how to deter students from this, turn to advice in Chapter 3

NO, the guidance is not specific to this task	Students at the start of their Master's studies are given a page of advice including the statement, '*Do your own work in home assignments*'. Two students submitted very similar essays and explained this by saying they always discuss their work.

YES, the guidance is relevant to this task	Students are told that they can work together throughout the practical task but when students hand in their final report, they must include a description of what help they used and how they used it. Two students submit very similar work without any note about how they carried out their assignment.
NO, the guidance is not relevant to this task	Students are told to 'use standard referencing conventions'. One student submits a report without in-text references.

Do not report work that the student has submitted for feedback or guidance only. Only report finished pieces of work.

YES, this is a final submission	The student submits a report labelled 'Final Version' which is heavily copied from Internet without adequate citation.
YES, this is a final submission	The student submits a report on or after the final deadline with the word "draft" in the file name which is heavily copied from Internet without adequate citation.
NO, this is not a final submission	The student submits work for peer review which is heavily plagiarised, and the other student points this out.
NO, this is not a final submission	The student submits a chapter of a dissertation to her supervisor and says, 'Can I have comments on this?' The chapter is heavily copied from Internet without adequate citation. This happens two months before the final submission date.

Do not report breaches of the Ordinance which are so minor or unimportant that the integrity of the work itself is not in question

YES, this breach threatens the work's integrity	The student's dissertation contains a 'discussion' section that is mostly copied from text books.
NO, this breach does not threaten the work's integrity	The student's dissertation contains several copied and unattributed phrases in the methodology section. The copied text explains why a quantitative rather than a qualitative method was used.
YES, this breach threatens the work's integrity	The student copied many of the problem solutions from another student.
NO, this breach does not threaten the work's integrity	The student submitted 12 problems of which half of one problem closely resembles the solution of another student.
NO, this breach does not threaten the work's integrity	The copied text amounts to 10 lines in a 50-page report.

Do not report students at the start of their programme.

YES, the student is not at the beginning of the programme	The student has submitted her final thesis.
NO, the student is at the beginning of the programme	The student entered a Master's programme (that is, in Year 4 of a 5-Year programme) 3 months ago and has not studied at KTH previously.

5.5 Reporting a case: the practicalities

If the teacher decides that the student must be reported for possible disciplinary procedures, the following information must be included in the documentation:

- the student's name, personal registration number and address
- the course name and code
- which examination is involved and its credits value
- a detailed outline of events
- a copy of the approved course syllabus and any course information covering the examination
- other information about disciplinary rules (written or oral) which were given to students
- a statement as to whether an interpreter is needed
- the dates of upcoming exam periods for the student
- any notes from meeting with student(s), with the teacher's signature
- a contact address for the person submitting the report
- the signature of the person submitting the report

The report should be sent to Rektor, KTH, 100 44 Stockholm.

Reporting a case of plagiarism: the evidence

The student's work must be sent to the Vice-chancellor as soon as it is decided that there is cause to suspect an attempt to deceive by the student. Include any other information (written or oral) with the work which was given to the student regarding how the task should be finished. This could include guidance on cooperation, citations, referencing etc.

A copy of the student's work should be marked to show which sections are not the student's own work. Usually, the marked sections show copying but any other evidence of plagiarism should also be noted. There is a list of possible indications in Chapter 4. If more than one source was used to construct the student's work (and the source or sources are not indicated), then the marking on the student's work should include an indication of the source. One way to make a link between the student's text and the original source is to use different coloured highlighter pens; another is margin notes. The marked-up work must be clear and all indications readable in photocopy.

The report should also show how the student's unattributed text matches the original source. In many cases, much of the matching can be done by electronic text-matching software (see Chapter 4). However, the teacher needs to annotate the electronic report to show where matches are significant and therefore contribute to the case. The teacher's annotation is important because software may select matches that are correctly cited, are not suitable for citation or are simply irrelevant. If the matching of student text and original source is done manually, comply with the following:

- Where the original sources are available and where the original sources contributed substantially to the decision to report, a copy should be made. Copies of sources which contribute only a small amount to the plagiarised work are not needed.

- On the copy of the original, mark any portions that were used incorrectly by the student (again, do so in a way that can be photocopied).

After a report is submitted

KTH has a clearly-defined process for managing disciplinary cases, including cases involving plagiarism. This is only a summary of the process. It does not include all the information such as how the student is informed, time limits, how appeals are managed etc. This summary, therefore, is not a statement of legal entitlement nor is it sufficient for anyone actually involved in a disciplinary case. For a full account, please consult the KTH Legal Section.

A summary: First, when a report is submitted, the student is confirmed as registered at KTH and the report is checked for all necessary information (see above). Additional or missing information is requested. Once the report is complete, the student is asked for a signed statement within two weeks. Translation services may also be required.

Next, the case is summarised for the Vice-chancellor, who decides whether (1) the case requires no further action, (2) a warning should be given or (3) it should be submitted to the Disciplinary Board.

The case is considered at the Disciplinary Board's next meeting. The student, the person submitting the case and any other people involved are asked to attend, in person or via telephone conference. The full procedures spell out in detail how meetings can be postponed. The Board then meets.

The Board reads the documents in advance, listens to the university legal adviser's presentation and hears from the person filing the report (if present), from the student and from any others involved. The Board decides whether to issue a warning letter or to suspend the student for a stated amount of time or take no action at all. Again, the full procedures go into detail about how the meeting is conducted, appeals, and how decisions are documented.

In cases involving suspension, schools (and Ladok) are informed and are responsible for the enforcement of the decision to suspend the student. During suspension, students may not:

- participate in any teaching, laboratory work, or any other work at KTH
- visit KTH teaching facilities or the KTH Library
- sit any examinations
- participate in any study trips