# Guidelines for Dealing with Plagiarism and for Use of Plagiarism Detection Software

These guidelines aim to support TUM examiners in the use of plagiarism detection software from a legal perspective. They cover all written and electronic examinations taken within the scope of degree programs, including those taken as part of the application and aptitude assessment process, as well as final theses (henceforth: module examinations). The special factors involved in checking doctoral theses for plagiarism are discussed in the final section of these guidelines.

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#### 1.1. What is "plagiarism"?

There is no legal or universally valid definition of plagiarism. At TUM, plagiarism is defined in the statute on safeguarding good academic practice as "unauthorized use or claim of authorship" (§ 13(1)2a). In terms of examination law, this definition is concretized as

knowingly using the wording of or idea behind another person's work, entirely or in part, or another person's ideas, to a not insignificant extent or weighting, without reference to the other person as originator.

- **"knowingly"**: A so-called "parallel creation", i.e. the accidental use of exactly the same wording, does not constitute plagiarism. In this case, nothing was purposefully "taken over" from a third party.
- "wording of or idea behind": not only word-for-word usage of a text but also paraphrasing of a text while retaining the intellectual message amounts to pretense of authorship where it does not exist. However, according to examination law, the purpose of examinations is to determine the examinee's own abilities. This is why we need to clearly establish whether the examinee's use of the text is presented as his or her own creative work or as evidence of his or her knowledge of the current state of scholarship in the relevant scientific field. Whether the pretense of authorship on the part of the examinee merits sanction according to examination law depends on the level of significance of the pretension (see below Section 1.2).
- **"another person's work"**: This goes further than a "work" within the meaning of copyright law, which must achieve a certain level of creativity to qualify as such. Here, "work" includes all outcomes/results/products that do not originate from the examinee him or herself (as explained above, the purpose of examinations to determine the examinee's *own* abilities).

- **"entirely or in part**": The uncommented use of an entire work (written text or also illustrations, graphics, etc.) or parts of works (individual sentences or paragraphs, chapters, etc.) constitutes deception about authorship.
- "another person's ideas": The development of ideas represents an intellectual achievement that is assessed under examination law. Anyone who conveys the impression through his or her presentation that they have developed an idea, but in truth have made use of another person's ideas, makes an undue claim to work that he or she did not create.
- **"not insignificant extent or weighting"**: To have an influence on grading, the work in question must exceed the De Minimis threshold for it to be assigned a measurable significance in terms of the competence attributed to a person. As a rule, individual identical word groups, therefore, do not constitute plagiarism. The conclusion that plagiarism is involved, however, can result both from the extent to which the text is appropriated (number of words/lines) and from the significance of the disputed text, which has been used and presented as one's own by the failure to cite its source (appropriation of another person's essential argument).
- "without reference to the other person as originator": Quotations that are assigned to the wrong person or are incorrectly cited violate good academic practice, but do not constitute plagiarism. Anyone who by mutual agreement submits the work of another person as his or her own (in particular, by hiring a ghostwriter) is not plagiarizing, i.e. does not appropriate the work of others under the pretense of authorship, but instead is being consciously deceptive about the text's true author. Such cases need not be assessed as plagiarism, since deception about authorship is covered by examination law (see below Section 1.2).
- Where no reference is made, the principle applies: The author is the originator of the text and of the idea; issues of copyright law regarding the level of creativity do not apply. Quoted material whose sources are not referenced, therefore, can be considered plagiarism without being subject to copyright law.

All cases of plagiarism violate the principles of good academic practice. They can carry consequences in terms of examination and copyright laws.

## 1.2. From plagiarism to deception according to examination law

Anyone who submits work that does not originate from them, whether completely or in part, insofar fails to submit a viable examination attempt, i.e. assessable proof of his or her competency, since the purpose of examination is to measure the examinee's own abilities. Whether this can be sanctioned under examination law is stipulated in the relevant examination regulation. These regulations define the type of decision and the decision-making process.

§ 22 of the **APSO** includes a legal basis for sanctions for all bachelor's and master's degree programs at TUM. According to the APSO, work is assessed as "failed" if the examinee attempts to influence the result of the work's assessment by means of deception. This means that the examinee has **knowingly and willfully** deceived examiners about the authorship of a text (passage). The burden of proof lies with TUM. A distinction must be made, here, between a "quotation mistake", i.e. overlooking a quotation within the meaning of an error in the submitted work, and deliberate deception about authorship. This is determined based on the individual case. A serious sanction (fail and repeat only once, or, in severe cases, exclusion from the examination process) can only be applied in the case of behavior that bears no proportion to feasible error. In other words, the extent of the deception must exceed the **De Minimis threshold**, i.e. must be capable of having a measurable impact on the assessment

of the work. The formula applied in law that the De Minimis threshold is exceeded when it is apparent to a knowledgeable third party that the examinee is "adorning themself with borrowed plumes" can be taken as a point of reference here.

The respective examiner is **responsible** for investigating the deception. The examiner is to hold a hearing with the examinee concerned to address the allegation of cheating. The hearing may be oral or written. If all parties agree, a third mediator/support person may also be called upon, e.g. students, if necessary the ombuds office. The outcome of the hearing should be documented in minutes of the meeting.

Sanctions for deceit established by examiners are defined in § 22 of the APSO. In the case of serious or repeated offense, the Examination Board will apply sanctions based on the assessment of the examiners and a position statement from the examinee.

Examiners may employ tools such as **plagiarism detection software** in order to identify deception about authorship. However, this is merely a **means to an end** and not in itself a decisive indication of plagiarism. The software can only point to suspicious passages. The assessment of whether plagiarism and deliberate deception are involved must always be made by the examiner. The person checking the work must be able to verify the text passages identified by the software, to determine the relevance of the indicated passages to the assessment of the submitted work, and to establish the subjective aspect of deliberate deception.

This applies equally for all other sources raising suspicion of possible misconduct, e.g. expert assessment by the ombuds office. The persons or bodies responsible for applying examination law, e.g. examiner or head of examination board (§22 APSO) themselves need to pass a judgment about the basic facts and the legal assessment of those facts.

The **burden of proof** for the existence of deception relevant under examination law lies with TUM. Thus, TUM must be able to prove with sufficient certainty that the case in question is, indeed, a case of deception, i.e. that a misconception was knowingly and intentionally created or maintained about the originator of the work. As a rule, purposeful deception can be proven only on the basis of evidence. Evidence is

- Passages using identical wording
- Paraphrasing based on a certain pattern (e.g. replacement of certain terms consistently with the words of another person)
- Rephrasing of original text, rearrangement of syntax and use of synonyms to deliberately disguise the sources
- Witness evidence (e.g. a person identifies him or herself as a "ghostwriter" which is prohibited under examination law).
- Other signs (e.g. examination number of another examinee on another student's own exam, use of incorrect results, which are, however, correct results from another exam group for the same task, etc.)

The more any other plausible explanation can be ruled out, the stronger the evidence of deception. For example, the use of identical text to answer free-text questions about complex subject matter provides more substantial evidence of unauthorized interaction than would be the case where the examination question only has two alternative answers that essentially involve naming a specialist term. The following measures can also counteract deception or provide more meaningful evidence of deception should it still occur (examples, non-exhaustive list):

- Creation of complex tasks to be processed via free text responses
- Creation of task groups (A, B, and C) that are assigned to examinees

- Use of randomly selected tasks from a pool of questions, sorted according to topic and degree of difficulty
- Swapping numbers in arithmetic problems
- Not using "old" standard questions

#### 1.3. Legal requirements for use of plagiarism detection software

The use of plagiarism detection software is a means of either detecting deception relevant to examination law or investigating a corresponding individual case of suspected deception. It concerns issues of copyright, data protection, and examination law.

However, the following general **principles** apply:

Work completed in fulfillment of examination requirements ("examination work") may **constitute a copyrighted work**. Where a copyrighted work exists, the author holds exclusive rights. This also includes the right to reproduction, storage, and distribution. The use and exploitation of works protected by copyright may only take place with the consent of the rights holder or on the basis of a legally standardized privilege.

In **data protection law**, the principle of minimum intrusion applies. Therefore, **as little personal data as possible should be collected or disclosed**. Personal data includes, among others, the name of the examinee or their student number. If, for example, software stores a piece of work on a server owned by a third-party provider in order to compare it with all available pieces of work on the Internet, care must be taken to use a minimum amount of personal data, so that the work is checked anonymously. If, on the other hand, the work is to be compared with another from the same group and the data does not leave TUM servers for this purpose, anonymization is not necessary.

The principle of equal opportunity is enshrined in examination law and requires a proportionate review of examination work to ensure that it was completed in accordance with examination law. This also includes a check as to whether the work was created by the examinee and whether any (text and intellectual) work quoted therein is correctly identified. The measures used for this review must be proportionate. In principle, the integrity of examinees is to be assumed. An absolute guarantee of the absence of deception, however, is neither possible nor necessary. The degree of deception prevention, in particular, by technical means, that is necessary and proportionate depends on the circumstances of the individual case. This includes, especially, the nature and conditions of the examination task (pure query or analysis and evaluation guestions, significance of the knowledge argumentation/individual derivation for the proof of competence, permitted aids). Examiners must use their judgement in deciding what constitutes a necessary and proportionate review within the broad **scope given them by** the principle of "Lehrfreiheit" (freedom of teaching) protected by Germany's Basic Law. This means that examiners use their professional discretion to decide whether plagiarism detection software is to be used to check the work. There is no obligation to use technical tools, such as plagiarism software.

# 1.4. Copyright classification:

Assuming that an examination work is, as a rule, a copyrightable work, copyright-relevant use of the work would include:

- 1. Digitalization of the work
- 2. Duplication when uploading to a server
- 3. Duplication by transferring the work to an external service provider
- 4. Duplication through addition to a database
- 5. Publication, where applicable, if the examination work is to be added to an examination pool.

Temporary acts of reproduction that are merely transient or incidental, for example, as is necessary when comparing the work with the database in the buffer, are permitted by law if the process involving the reproduction (in this case: a check using the plagiarism detection software) constitutes a lawful use (§44 a(2) German Copyright Act (UrhG)). There is no legal privilege for the other types of use mentioned above as per § 44a German Copyright Act (UrhG).

The most legally sound variant is to obtain the **express consent** of those concerned for the specifically described type of use. However, it is also possible to **tacitly accept consent**. For this, it must be indirectly evident from the action of the examinee that they agree to the type of use. The examinee should be informed about this as clearly as possible in advance to ensure that their implied consent also undoubtedly extends to the intended use. This includes informing them as early as registration that plagiarism detection software is being used and providing a description of its mode of operation, if necessary, also via a link to a central software description.

If implicit consent from the examinee can be assumed, the principle of *Zweckübertragungslehre* [rights of use granted within scope of necessary, contractually specified purpose] should be observed. According to this principle, rights of use will have only been granted to the extent necessary. The following should, therefore, be noted with regard to plagiarism detection software:

- An automated plagiarism check should only be used as a tool if the examiner concludes that this is necessary to assess equal opportunity (see description above).
- The work to be reviewed will not be made accessible to any other group of persons (beyond the group of persons involved in the examination, in particular tutors, examiners, etc.).
- There is no storage of the examination work beyond the review of the work (no examination pool).

## 1.5. Data protection classification:

Data protection law is concerned with the protection of personal data. This includes, in particular, the student's name and student number. Data privacy protection standardizes a **ban with permit reservation** related to such data (Art. 4(1) European Basic Data Protection Regulation (DSGVO)). Therefore, use of the aforementioned data is prohibited unless a legal regulation exists that allows use of the data or permission has been granted. A legal basis is provided for use of the data (Art. 6(1)e DSGVO) if the processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller. It should be noted here that data is also used as sparingly as possible. **The use of a name and student number during processing with external plagiarism detection software is not justifiable under data protection law without explicit consent.** 

However, if the examiner deems an external review necessary (see above Section 1.2 "burden of proof"), and the work is reviewed anonymously, such use is not objectionable under data protection law.

It is disputed whether an explicit legal basis under examination law for the use of plagiarism detection software is required. In view of current developments, TUM is planning to create such a legal basis for bachelor's and master's degree programs in the APSO.

# 2.1. Special case of doctoral degrees

§ 11(5) of the TUM Regulations on the Awarding of Doctoral Degrees already provides a **legal basis** for the use of plagiarism detection software to check the doctoral theses. The submission of a digital copy of the dissertation is also standardized in § 8(2) of the Regulations.

If objections are raised during the assessment of the dissertation on grounds of suspected cheating, the Examination Committee (§ 11 of Regulations on the Awarding of Doctoral Degrees) or the School Executive Board (§ 13(1) of Regulations on the Awarding of Doctoral Degrees) is called upon to make a final decision on the further progress of the procedure.

If attempted deception is established before the doctoral certificate is issued, the doctoral work is declared invalid and the doctoral degree irreversibly failed (§ 27 of Regulations on the Awarding of Doctoral Degrees).

As a rule, the TUM ombudspersons are involved in this process. They may establish an ombudsperson committee to investigate suspected plagiarism in more detail. The final report of the ombudsperson committee may be used by the Examination Committee as an objectively determined factual basis for its decision.

If a decision must be made on the revocation of the doctoral degree, in the case of doctoral examination processes that have already been completed, this decision is to be made by the Department Council or School Council. As a rule, the ombudspersons are involved, here, and will set up an ombudsperson committee.

The President of TUM will be informed about the decision reached by the Department Council or School Council. If the doctoral degree is to be revoked, a corresponding notice, signed by the respective dean and the President of TUM, will be issued.