code of ethics for scientific work and research studies at mci – the entrepreneurial school®

Translation of the German version „Ethikkodex für wissenschaftliche Arbeiten und Studien am MCI – Die Unternehmerische Hochschule®“ (Date: 14.03.2023)

1 preface

The MCI is an entrepreneurial university characterized by the development of pertinent innovations with and for partners from science, society, business, and politics. MCI's application-oriented approach to competence development is intended to create practical solutions for human and social problems, to provide scientific training and continuing education programs that trigger sustainable and socially responsible action, and to strengthen the region through know-how transfer.

The MCI is keenly aware of its social responsibility and the role model effect this entails. For this reason, scientific work and research studies (bachelor's theses, master's theses, dissertations or other research studies and corresponding publications) at MCI must not only comply with legal regulations and self-imposed standards, but also in particular with ethical values. Against this background, this Code of Ethics for Scientific Work and Research Studies at MCI represents a commitment on the part of the Entrepreneurial School® to these objectives and establishes a binding framework for action that provides general parameters as well as responsibilities regarding the planning and practical conduct of scientific work. Ethical challenges of research projects are to be identified, reflected upon, and evaluated in order to learn from them, make well-founded and justified decisions.

This Code of Ethics applies to students of the different departments and their supervisors, university management, researchers, lecturers, sponsors and partners, as well as persons who participate in research studies or are involved in any other way.

The Code of Ethics for Scientific Work and Research Studies at MCI also forms the foundation for the work of the MCI Ethics Committee in its evaluation of corresponding ethics assessments.

2 general conditions for scientific work

The freedom of research as protected in the Federal Constitutional Law, the State Constitution, the University of Applied Sciences Act, and the Universities Act (2002) describes the fundamentals of scientific practice. In addition, other relevant fundamental rights, including due respect for human dignity, must always be observed in the entire research process. The conditions for scientific work and research studies at MCI are based on these fundamental principles. They determine whether and how new disciplinary and interdisciplinary research findings can be achieved and how standards and principles of research ethics can be complied with in scientific practice.

3 good scientific practice

"Good scientific practice implies compliance with legal regulations, ethical standards and the current state of knowledge of the respective subject as part of the tasks and objectives of the respective institution" (51(2)(33) University Act (UG), authors' own translation from German). Academic integrity and the standards of good scientific practice are indispensable cornerstones of scientific work. They are prerequisites for the reputation of teaching and research institutions and their affiliated academic staff, but above all for the trust placed in them by society. All members of the research community, including students, supervisors, researchers, and clients, are thus bound to academic integrity.

In this context, MCI fulfills its responsibility by

- ensuring the provision of training and support for good scientific practice,
- providing the infrastructure to ensure the same,
- appropriately sanctioning allegations of misconduct, and
- supporting transparent communication through responsible bodies.

3.1 PRINCIPLES OF ACADEMIC INTEGRITY

Derived from the *European Code of Conduct for Research Integrity*, the following principles of good scientific practice are expected from students, their supervisors, and other staff involved in studies at MCI:

- A transparent and clear documentation of the methodological procedure and the results of the study in order to enable study reproduction (replicability, verifiability).
- A transparent and clear handling and correct citation of ideas, data and sources originating from others. This also includes the clear identification of already published texts or text parts of the study author (avoidance of self-plagiarism).
- A clear and honest mentioning of all persons involved in a study and their respective contributions. This also applies to collaborations between students, lecturers, and supervisors, as well as the transparent presentation of any financial contributions.
- Disclosure of possible conflicts of interest and transparency with regard to the funding of research studies work and reflection of potential interests (including economic) that are associated with the corresponding scientific work.

3.2 ACADEMIC MISCONDUCT

"Academic misconduct occurs when standards of good scientific practice [...] are violated willfully, knowingly, or through gross negligence." (OeAWI 2019, p. 12, authors' own translation from German)

- **Willful** means that the offence with standards of good scientific practice is considered possible and is not further considered or this is done consciously and intentionally.
- **Knowingly** means that the offence is perceived to be certain.
- **Gross negligence** means that due diligence is disregarded to a noticeable degree and that it is not recognised that the standards of good scientific practice are being violated.

According to the OeAWI (2019, p. 14) the following behaviors are considered particularly serious misconduct:

- **Fabrication**: E.g., the invention of research data or other research results.

- **Falsification**: E.g., the falsification or manipulation of research data or other research results, including the selective omission of data or the biased interpretation or selection and rejection of data that do not correspond to the desired research outcomes.
- **Plagiarism**: According section 51(2)(31) UG, plagiarism is "in any case constituted when texts, contents or ideas are taken over and presented as one's own. This includes in particular the appropriation and use of text passages, theories, hypotheses, findings or data by direct, paraphrased or translated copying without appropriate acknowledgement and citation of the source and the author" (authors' own translation from German). This also includes the use (including the publication) of others' research ideas or research concepts, of which knowledge was obtained in a confidential context (e.g., through a peer review or other reviewing processes).
- **Unauthorized (co-)authorship**: The fabrication of (co-)authors. If several persons are involved in a research study, only those may be named as co-authors who have contributed significantly to the design of the study (experiments), to the development, analysis and interpretation of the data, or to the formulation of the manuscript itself, and who have agreed to its publication. So-called "honorary authorships" are not permitted. Only the actual contribution to the creation of the scientific work can justify (co-)authorship.

Compliance with the rules of good scientific practice is a fundamental duty for everyone working in academic research. The MCI ensures that all MCI employees are aware of these principles and the responsibilities they entail. In cases of proven academic misconduct, appropriate measures are taken to adequately punish such violations.

4 rights, duties and conflicts in the research process

In the course of scientific work, the rights of study participants, experts and other directly and indirectly affected persons must be protected. These rights include in particular

- the right to **decide freely** concerning the participation in scientific research on the basis of comprehensive information,
- the right to **participation and co-determination,** as well as the
- **protection from immediate and long-term negative consequences** through participation in the research.

4.1 BENEFITS OF SCIENTIFIC WORK AND CONFLICTS OF INTEREST

In any scientific undertaking, possible risks must be weighed against the possible benefits. The different interests and expectations of the participants and other stakeholders must be taken into account. Conflicts of interest must be made transparent, and agreements must be made in advance on how to deal with expectations that are not fulfilled or cannot be fulfilled. A conflict of interest exists if a researcher, due to personal or other circumstances, has conflicting interests that deviate from the principle of a "pure search for knowledge" with regard to a specific research project.

4.2 POWER RELATIONS AND DIVERSITY AWARENESS

When reflecting on the possible consequences of scientific work, the social, political and institutional conditions in which the research takes place must be taken into account. Research leaders have to reflect on the power relations in these contexts and their own position in these relations as well as possible conflicts

of interest between the persons (groups) involved. Particularly in dealing with marginalized groups, care must be taken to ensure that they are not again excluded by the project in question. Social diversity has to be represented through an intersectional and diversity-conscious perspective.

4.3 BURDEN AND RISK

In any scientific work, careful consideration must be given to the risks and burdens that may arise from studying the groups of people directly and indirectly involved (all persons interviewed/observed, including experts and groups of people who may be affected by the results), in order to keep these as low as possible. On the one hand, it is important to avoid possible (re-)traumatization, but at the same time the research partners and participants must be respected as subjects capable of making decisions, who can and should decide whether they want to expose themselves to a possible risk or not.

Particular sensitivity must be exercised with regard to persons in institutional power relationships, e.g., persons in inpatient facilities, patients, etc. In particular, it is essential to ensure that non-participation does not have any negative consequences for the persons concerned. Neither should the impression be created, that participation could result in a benefit.

For potentially stressful situations, precautions must be taken so as to provide support to participants if necessary (debriefing, provision of contact addresses, referral to counseling centers, etc.).

4.4 PARTICIPATION IN THE STUDY PROCESS

Study participants must be given the opportunity to participate appropriately in the research process under the given circumstances. The type and extent of participation must be designed according to the physical and intellectual possibilities and competencies of the participants. It is important to reflect on the extent to which the conditions of a given study allow participation and the extent to which participation reaches its limits. The selection of study participants and the design of the scientific work must also enable the participation of marginalized groups within the scope of possibilities, so that social diversity is accounted for.

4.5 SUPERVISION & EXAMINATION

The following principles apply to the supervision and review of scientific papers at MCI:

- Possible biases are to be openly declared before accepting a supervisory role. At the beginning of the process, potential reviewers have the opportunity to declare any biases, conflicts of interest or incompatibilities and to judge for themselves whether these stand in the way of a fair assessment of one or more candidates.
- Information shared during a supervision and/or review process is considered confidential.
- When supervising project work and theses, the supervisors must assume special responsibility with regard to the ethical acceptability of the student's research activities.

4.6 INVOLVING THE PUBLIC

The MCI is aware of its overall social responsibility as a teaching and research institution. Accordingly, the following principles apply to all scientific work at MCI:

- As a matter of principle, not only the individuals participating in a study but also the broader groups and communities to which they belong should be included in the consideration of the risk of potential harm. This is especially true for groups of people who are particularly vulnerable, in need of special protection, or socially disadvantaged.

- Since the results of scientific work can have a wide range of effects on society, the general public should also be addressed accordingly. This should also support the stronger embedding of science and research in society.
- MCI supervisors, researchers, teachers, and students are aware of their responsibility to counteract any misinformation with their scientific competence. The targeted use of science communication can help to establish a link between individual lives and science.

5 research data management and confidentiality

The right of data protection is decisively enshrined in various national and supranational sources of fundamental rights (such as Art 8 CFR, Art 16 TFEU, Art 8 ECHR or Section 1 DPA) as well as in the GDPR, which has been effective since 25 May 2018, and implements the right of individuals regarding their personal data to protection. In the context of scientific work, researchers are required to provide study participants with detailed information about how personal data will be handled. In addition, organizations that process data must ensure that it is properly protected and, when no longer needed, that it is deleted. Thus, when personal data are processed in scientific work, research leaders and all their partners, employees, and service providers must be able to demonstrate, upon request, that both legal and ethical requirements have been met. All parties involved are obliged to comply with the applicable legal regulations.

5.1 IMPORTANT FUNDAMENTALS

All scientific work that involves the processing of personal data must include information on data protection provisions in its study description. In a scientific study, information must be treated as personal data if there is a prospect of identification of individuals. Since it is difficult to assess the risk of identification with absolute certainty, the greatest possible care must be taken. It is more likely that a project will pose a higher ethical risk if it involves the following:

- The processing of "special categories" of personal data (formerly referred to as "sensitive data");
- The processing of personal data relating to minors, vulnerable persons or persons who have not given their consent to participate in the study;
- Complex processing operations and/or processing of personal data on a large scale and/or systematic monitoring of a publicly accessible area on a large scale;
- Data processing techniques that are invasive and pose a risk to the rights and freedoms of research participants, or techniques that are susceptible to misuse;
- The collection of data outside the EU or transfer of personal data collected in the EU to companies in non-EU countries.

When special categories of data (formerly referred to as "sensitive data") are processed in a research study, a detailed analysis of the ethical issues raised by the project methodology must be conducted. In particular, this must include the following:

- An overview of all planned data collection and processing operations.
- Identification and analysis of ethical issues that may arise.
- An explanation of how these problems can be mitigated in practice.

5.2 INFORMED CONSENT

Informed consent describes the comprehensive explanation of the research project and any associated risks and burdens. For study participants, this consent must be obtained in a manner that meets the minimum standards of data protection and includes at least the following:

- The identity of the research leader responsible for data processing (and, if applicable, the contact details of the data protection officer).
- The specific purpose of the processing for which the personal data are used.
- The rights of the study participants, in particular the right to withdraw consent or, if desired, to access data.
- Information on whether and for what purposes data will be shared with third parties (Note: If it is intended to further use or make data available for future studies, it is recommended to obtain explicit consent for this secondary use of the data).
- Information on how long the data will be kept and when it will be deleted.
- If the project involves potential risks to the rights and freedoms of the participants, they must be made aware of these risks.

Informed consent must be provided in a form and style adequate for the individual. This may require the provision of information in plain language or in the individual's native language. If necessary, consent must also be obtained from legal representatives or, in the case of minors, from their legal guardians.

Data collection (such as covert studies) that, for practical reasons, does not require informed consent must be justified with particular care. Such is permissible in exceptional cases, if the goal of the scientific work or the person conducting the study would be endangered by the informed consent or if this is indispensable for the protection of other persons. In such cases, a debriefing should be carried out after the study if possible.

5.3 DATA COLLECTION AND PRIVACY

When personal data are collected, both ethical and legal obligations apply to ensure that the participants' information is adequately protected. Research projects must therefore include details of the technical and organizational measures that will be applied to protect the personal data processed or to be processed. Such measures may include pseudonymization and encryption of personal data, as well as policies and procedures to ensure the confidentiality, integrity, availability, and resilience of processing systems.

If the intention is to anonymize collected data, the time of the anonymization process is of utmost importance. Data is only anonymized if anonymization takes place at the time the data is collected, so that no personal data is actually processed. If anonymization takes place at a later point in time, e.g., if personal data is removed only during the transcription of audio recordings or at the point of feeding it into a database, the initially collected raw data is considered to be personal data, and is thus subject to legal provisions, in particular in connection with the protection and deletion of the data.

Data Protection by Design is one of the best ways to address the ethical concerns that arise during the design phase of a study. Measures to achieve Data Protection by Design can include the following:

- The pseudonymization or anonymization of personal data;
- Data minimization (only record what is really needed);
- Cryptography (e.g., encryption and hashing);
- Use of privacy-focused service providers and storage platforms;
- Agreements that allow data subjects to exercise their fundamental rights (e.g., with respect to direct access to personal data and consent to its use or transfer).

5.4 DATA OF MINORS

At EU level, Art 8(1) GDPR contains special protection measures for individuals who have not yet reached the age of 16, or 14 in Austria (4(4) GDPR), with regard to "information society services". Among other things, these include the requirement that the consent or approval (= authorisation) of the holder(s) of parental responsibility (in Austria, this is the custodian) for the lawful processing of personal data.

5.5 SECONDARY USE OF DATA

If personal data from previous studies are used, information on the initial data collection, methodology and consent procedure must be provided. Confirmation that the authorization to use the data has been obtained is also required.

When using publicly available data, information about the source is required and it must be ensured that the data are open and publicly accessible and may be used for research purposes. It is not sufficient that the data can be accessed. They must have been made public to the extent that data subjects have no reasonable expectation of privacy. The intended use of the data must comply with the published conditions.

If data from social networks are used in a study and no explicit consent is/can be obtained from the subjects involved for the use of these data, the researchers must assess whether these subjects actually intended to publish the relevant data (e.g., by evaluating the relevant privacy settings of a post or the target group for which this post was made available).

If personal data are processed without the explicit consent of the data subjects, researchers must explain how they obtain these data. The use must be justified, and researchers must ensure that the processing of the data is appropriate for the subject of the study.

6 publication of study results

As a higher education and research institution, MCI aims to make all findings obtained from scientific work and research studies accessible to as wide a public as possible, for example by publishing results in scientific publications. This does not apply to findings that could affect monetary, intellectual property, or other interests of third parties (corporate partners, etc.). The MCI is particularly concerned to ensure that such publications do not cause any damage to the public (miscommunication, misleading, etc.), but also that the study authors themselves do not suffer any disadvantages.

6.1 OPEN ACCESS

Study results should be made available to the public in a suitable form in order to promote scientific discourse and create the basis for further scientific research. In line with the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, open access publication is preferred. The decision whether or not to publish a study can only be made by the research leaders or their supervisors. Any influence by third parties (e.g., clients) on the research results must be avoided.

6.2 CONSEQUENCE OF PUBLICATION

Although study authors cannot foresee how the outcomes of their research are received, the risks of publication, e.g., negligent or improper use of research results, must be critically reflected upon. The dual-use

problem, i.e., the possibility of using study results for both useful and harmful purposes, affects all departments at the MCI. The consequences of scientific work and their controllability must therefore be considered from the start by the research team.

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