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# University teacher and student judgments on misleading behavior in study situations





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## **Abstract**

### **University teacher and student judgments on misleading behavior in study situations**

This study deals with teachers' and students' judgments of misleading (e.g. cheating or plagiarism) behaviors during examinations. The data was collected at a university in Sweden using a questionnaire presenting specific behaviors to be judged. In total, 253 individuals completed the questionnaire. The teachers, in contrast to the students, tended to judge the behaviors presented as more serious. There was, however, plenty of variation in the judgments made by both teachers and students. Although the teachers, on average, tended to judge the behaviors as more serious, about 20% of the students were found to judge the behaviors as more serious than the average teacher. It was also found that about 20 % of the teachers judged the scenarios as less serious compared to the average student judgments. This indicates a lack of agreement among teachers and students on the definition of misleading behavior. Subjective opinions seem to play a more important role for judgment than having actual knowledge about the rules and regulations stating what misleading behaviors really are in academic work.

**Keywords:** Misleading behavior, Cheating, Plagiarism, University students, University teachers

# Sammanfattning

## Universitetslärares och studenters bedömningar av fusk i olika studiesituationer

Den aktuella studien undersöker lärares och studenters bedömningar av vilseledande beteenden vid högre utbildning (t.ex. fusk eller plagiat). Datainsamlingen gjordes vid en svensk högskola genom att forskningsdeltagarna blev presenterade för scenarier och fick till uppgift att bedöma i vilken grad dessa beteenden kunde bedömas som fall av fusk och plagiat. Totalt avslutade 253 personer enkäten. Resultaten visade att lärarna tenderade att bedöma de beteenden som presenteras som mer allvarliga än vad studenterna gjorde men det fanns också stora variationer i bedömningar bland både lärare och studenter. Till exempel visades att, trots att lärarna i genomsnitt tenderade att bedöma beteendena som mer allvarliga, bedömde ungefär 20 % av studenterna beteendena som allvarligare än den genomsnittliga läraren. Dessutom bedömde omkring 20 % av lärarna scenarierna som mindre allvarliga jämfört med den genomsnittliga bedömningen från studenterna. Dessa resultat indikerar brist på överensstämmelse mellan lärares och studenters bedömningar och om hur vilseledande beteende definieras. I det akademiska arbetet tycks subjektiva bedömningar och betraktelsesätt spela stor roll, ibland större roll än att ha kännedom om de regler och förordningar som anger vad vilseledande beteende egentligen är.

**Nyckelord:** Missledande, fusk, plagiat, studenter, universitetslärare

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# Background

In the General Provisions of the Swedish National Agency for Higher Education it is stated that:

“Disciplinary measures may be invoked against students who:

1. use prohibited aids or other methods to attempt to deceive during examinations or other forms of assessment of study performance”

According to this definition, provided by the Swedish National Agency for Higher Education (2006), cheating is, in Sweden, regarded as an intentional act, whereas plagiarism can be both intentional and unintentional (Hult & Hult, 2003). Both plagiarism and cheating are regarded as misleading behaviors where the student’s intention is to make the performance better than the actual performance would have been. There are, however, currently several debates on how to use and interpret the term plagiarism and there seems to be no consensus on what plagiarism is (Babic, 2005) – not even among teachers and students. The traditional view is that plagiarism undermines the academic system and creates unequal conditions for students. Also, plagiarism can be regarded differently in different parts of the world. According to Pecorari (2008) and Pecorari and Shaw (2010) the idea of plagiarism cannot be considered as a universal concept. It has to be understood from the rhetorical context of academic writing. Plagiarism can be discussed as an integral part of an academic writing course, not simply as a moral imperative addressed at the beginning of a course and then ignored until someone is caught plagiarizing. Pecorari (2002) has reviewed definitions of plagiarism and identified six elements that can be summarized thus: plagiarism is something that has been taken from a particular source by a person without acknowledgement, with or without the intention to deceive. Sutherland-Smith (2008) claims that plagiarism ought to be seen as a continuum that has to be viewed through multifaceted lenses. From a critical literacy perspective, plagiarism must be seen as a meaning-making and dynamic process, which involves the readers and the text. Hence, plagiarism can be viewed as a socially and individually constructed act. For instance, research on academic writing suggests that, depending on their enculturation into disciplinary discourses, students exhibit different levels of awareness of the available and privileged identity options in the social contexts of writing. Textual plagiarism by students can be viewed as an issue of authorial identity construction. Hence, the roots of students’ creation of institutionally unacceptable texts are founded in their epistemological orientation, as well as their authoritative view of source texts (Abasi, Akbari & Graves, 2006).

The Swedish National Agency for Higher Education divides cheating into six categories: crib sheets and unauthorized help, unauthorized collaboration, plagiarism and fabrication, forging documents, disruption in the teaching situation, sexual and ethnic harassment. In this article we will however use the term *misleading behavior* for cheating, plagiarism and other forms of fabrication. The procedure for reporting misleading behavior can differ between universities in Sweden. However, a common procedure is the following: When cheating or plagiarism is suspected, it is usually an examiner or teacher who starts the procedure by reporting suspicions of misleading behavior to the head of department or the president of the University. The President's Office investigates the matter and there are three possible rulings: 1) leave uninvestigated 2) send a warning from the President of the University 3) forward to the Disciplinary Committee for investigation and after the ruling the student is informed of the ruling and the consequences.

The number of disciplinary matters in relation to the number of students has increased between 2005 and 2010, from 0.15 per cent of the students to 0.23 per cent. The most common reason that students are subjected to the Disciplinary Board is plagiarism. Of the 750 students who were subjects for disciplinary action in 2010, 591 people were suspended and 159 received a warning (Högskoleverket, 2010). While the members on the Disciplinary Board consider unintentional cheating as not being possible, students are of the opposite opinion. In Widén and Bohlin's (2007) study among Swedish university teachers and students, 58 % of the university teachers believed that cheating is seldom or never intentional, while 42 % believed that cheating is often to very often intentional. They also found that 11% of the students believed that they may have cheated unintentionally (e.g. plagiarism) on occasion, 62 % that they had never cheated, and 27% that they did not know whether they had cheated or not. In addition, 8 % of the participants said that they had cheated intentionally, 84 % that they had never cheated intentionally with 8 % reporting that they did not know. It is possible that the number of students who had cheated intentionally was underestimated, since other studies (e.g. Hult and Hult, 2003; Lupton, Chapman and Weiss, 2000) imply that cheating is not always discovered and/or reported. However, when compounding intentional and unintentional cheating the percentage increases to 19%, and when adding those who reported that they did not know if they had cheated or not, the percentage increases to 47%. According to these results, the estimation of how frequent misleading behavior is may vary between 8% and 47 %. The result showing that 27 % of the students report that they do not know whether they have cheated intentionally or unintentionally makes it clear that there is an uncertainty about where to draw the line between cheating and not cheating (Widen & Bohlin, 2007). In spite of the fact that the texts clearly concerned situations of cheating,

many of the teachers requested more information about the situations and claimed that there might be mitigating circumstances, which they should be aware of before deciding whether or not the student was cheating. There are clearly grey areas concerning how cheating is defined and interpreted, although university policies state something else. Accordingly, Widén and Bohlin (2007) discuss whether groups of students who traditionally have not been able to attend university, e.g. because of a different socioeconomic background, ethnicity or gender, are more often subjected to scrutiny. Also Pecorari and Shaw (2010) found that advisors were reluctant to report misleading behavior. They rarely recognized any instances of inappropriate use of source texts in their advisees' work until they were shown the source texts. The advisors were hesitant to use the word "plagiarism" to describe what they saw. This hesitancy was indicative of the difficulty in coming to a common agreement as to what should be considered plagiarism. Hence, there still exists a complexity in how plagiarism is viewed today.

One of the most important actions for avoiding misleading behavior is to take preventive action. Universities, international as well as national, have abandoned the belief that plagiarism is a concept that the students are already familiar with and understand in the examination situation. Hence, it is common to have policies dealing with restrictions in academic work, information concerning how to work with other people's texts, or demands that the students guarantee the originality of their work by signing a form stating that they have not copied any texts (Nilsson, Svensson & Olenius, 2007). Furthermore, Nilsson et al. (2007) argue that teachers as well as students are oblivious to their university's policies and regulations regarding plagiarism and in some cases they do not even know about the existence of such documents. The importance of clear instructions for examinations is emphasized by the Swedish National Agency for Higher Education and by the Disciplinary Board and it is assumed that it is enough to provide this quantity of information in order to be able to suspend students if they try to deceive (Nilsson quoted in Nilsson et al., 2007). Teachers, however, disagree on how to interpret the instructions and often find them lacking. Also, Babic's (2005) study revealed that 52% of the students and 78% of the teachers had no knowledge of the university's guidelines for handling suspicion of plagiarism. Further, 38 % of the teachers reported that they never bring up plagiarism for discussion among their students. Of the students, 61% claimed that they have never discussed plagiarism with their teacher and 75% of the students reported that they had not discussed the correct use of references in academic work. Nilsson et al (2007) argue that teachers have to understand that there are competing views on what it means to work with other people's texts correctly and that there might be differences between disciplines, examination forms, and individual beliefs about how to work with texts correctly and how to

avoid plagiarism. Students also have different opinions about using other people's texts and sometimes become aggressive when their text is identified as containing plagiarism, since they believe that changing a few words in a sentence is enough. They often point out that they have not received enough training in academic writing and how to use references. According to Nilsson et al. (2007), education about plagiarism alone will not lead to absolute clarity about academic writing and plagiarism. Instead it is reasonable to create an understanding of the different ways of interpreting the rules of academic writing regarding different disciplines and examination forms. Teachers and students need to be aware of the differences in perceiving what plagiarism is and what is not tolerated.

According to Babic (2005), students and teachers give the same explanations as to why students cheat, but they prioritize the reasons differently. Among teachers the main reasons were considered to be 1) increased access to materials on the Internet, 2) laziness, 3) ignorance of how to reference, 4) lack of awareness of it being wrong and 5) lack of time. The students reported 1) laziness, 2) lack awareness of it being wrong, 3) lack of time, 4) ignorance of how to reference and 5) increased access to materials on the Internet. Hult et al. (2008) conclude that students' perceptions of what is a high or low degree of cheating vary depending on the degree of effort they put into the act as well as the outcome in terms of achieved learning. In other words, students may tolerate other students' cheating if the cheaters have put plenty of effort into a specific task and therefore also learned something. Hence, the students take other moral considerations into account than just considerations about the actual regulations of the university. Also, Park (2003) concludes that plagiarism is common and is increasing, especially with increased access to digital sources and that students often rationalize their cheating behavior. Cheating behavior may also be connected to the students' identification with their specific school culture (Hult et al, 2008). Students who feel that they can identify with the social norms of academic work and regard this work as important are less inclined to cheat regardless of them being "strong" or "weak" students. Further, students tend to judge cheating more severely when the subject is more important for their future work and less severely if it is a subject which is believed to be not as important for their future work (Hult et al., 2008).

Another possible explanation for the difference between the student and teacher judgments of misleading behavior is the fact that students and teachers belong to different groups. Tajfel (1982) suggests that an in-group is a social group towards which an individual feels loyalty and a wish to act in accordance with the group norm. The individual's loyalty to the group often reveals itself as an in-group bias. This means that individuals in one's own group are favored. Individuals who are members of an out-group are, on the other hand, usually

approached with feelings of opposition, or a desire to compete. In general, people therefore tend to privilege in-group members over out-group members. Put in the context of misleading behavior, students may view other students as an in-group and teachers as an out-group. Teachers, on the other hand, are likely to view other teachers as an in-group and students as an out-group. In Babic's (2005) study, 20% of the teachers reported that they had ignored cases of plagiarism. The most common cause for their decision was that the teachers had not had enough time or reliable tools to check and test for plagiarism. According to the same study, there were disagreements within the group of teachers and the group of students, but also between the two groups, regarding the definition of plagiarism. The students did not judge situations as containing cases of plagiarism as often as the teachers did. The greatest difference between the students and the teachers was found in situations regarding copied material from the Internet and translations of texts from another language without making a reference.

## **Aims**

The purpose of the present study is to investigate teacher and student judgments of misleading behavior in relation to academic achievements. The purpose is also to analyze whether background information (gender, ethnicity, study experience, etc.) about the people in the scenarios presented may affect the teacher and student judgments of the gravity of the behavior.

## **Research questions**

1. Are there any differences between teacher and student judgments regarding the misleading behaviors presented in the scenarios?
2. Does background information about the person in the scenario affect the student and teacher judgments regarding the degree of seriousness of misleading behavior in the scenario?
3. Is there any difference between the students' and the teachers' opinions as to whether the cheating is done with or without intention?

## **Method**

### **Participants and procedure**

The sample comprises 132 students majoring in education enrolled on a teacher-training program and 121 teachers working at the same university in Sweden. The university offers a variety of programs in engineering, social and behavioral sciences, education, nursing, IT and economics, has 575 employees and 12,000

students. It can be regarded as a typical institution in the Swedish university landscape. In total, 253 individuals replied to the questionnaire, however 4 replies (3 teachers and 1 student) were incomplete (internal drop-out), and were therefore excluded from the sample. Hence the sample is based on 249 questionnaires. There were no external dropouts in the student sample, since the data was collected during class. In the teacher sample, the dropout rate was about 50%. One reason for this dropout rate among the teachers might be due to the workload at the time. Most teachers were involved in examinations at the end of the semester and that may have been a reason not to participate. This means that the dropouts could be random and not systematic, however we cannot be certain.

## Ethics

The participants received written information about the study's purpose, that the data would be used for research only and that the result would be presented on a "group level" in order to guarantee that respondents could not be linked to a specific reply. Further, the respondents were informed that participation in the study was voluntary. The study was conducted according to the ethical guidelines of the Swedish Research Council, which specifies requirements for information, consent, usage of data and confidentiality (Vetenskapsrådet, 2011).

## Measurements

An instrument was developed based on previous research (e.g. Hult & Hult, 2008; 2003; Nilsson, 2008) and an earlier study by the authors (Widén & Bohlin, 2007). It included questions on students' and teachers' opinions about cheating (deliberate or otherwise) and the frequency of such behavior. Furthermore, the instrument included a part describing six different scenarios in academic situations, for which the participants were asked to make 1) judgments of the degree of *cheating* and 2) make a judgment of the degree of *seriousness* of the misleading behaviors presented in the scenarios. The different scenarios and the related questions were piloted among both teachers and students (n=10, n=10) and were adjusted in response to the reported difficulties (terms, language, comprehension etc.). The participant was asked to mark to what degree they believed the person in the scenario was cheating and in addition to mark the degree of seriousness of the particular misleading behavior on a Likert scale of seven degrees (6 = to a very high extent, 0 = not at all). We decided to use the concept of "cheating" instead of "misleading behavior" for all the judgments, in that the term "misleading behavior" has legal connotations, while the term "cheating" is used in everyday language. This question was asked in every scenario, regardless of whether the scenario dealt with cheating or plagiarism. In scenario 1 and 3 manipulations were made in order to investigate if background

information about the person (e.g. gender, ethnicity, previous study experience, etc.) in the scenario would affect the participants' judgment of the described behavior in the scenario. The reason for manipulating these specific scenarios was that they were considered to be the two scenarios most distinguishable in terms of what is and what is not misleading behavior. The questionnaire included questions about the participants' gender, age, etc.

## **Description of the scenarios**

The six scenarios are presented below and incorporate misleading behaviors including cheating and plagiarism. Presentation of mean and standard deviations for the scenarios are given in Table 2.

Scenario 1a: On a course, the students are divided into working groups with five students in each group. The task for the group is to cooperate and discuss literature and lectures during the term and to write group assignments, which will be examined. In one of the groups, four of the members do all the work. The fifth member in the group does not contribute to the work, and is often missing in the group discussions. Nevertheless, all names of the members in that group are written on the group assignment at the end of the course when it is sent in for examination.

To what extent do you consider that the fifth student is cheating?

Not at all 0-1-2-3-4-5-6 To a very high extent.

2) A student reads a text where the author refers to other sources. In the student's essay, the student uses the sources mentioned in the text, without finding the primary sources and reading them.

To what extent do you consider that the student is cheating?

Not at all 0-1-2-3-4-5-6 To a very high extent.

Scenario 3a: A student writes an essay for a bachelor's degree with an empirical data collection. In the introduction to the essay, the student cites theories verbatim from other essays and sources on the Internet without clearly stating that they are quotations.

To what extent do you consider that the student is cheating?

Not at all 0-1-2-3-4-5-6 To a very high extent.

4) Two students work with a group assignment. They decide to be responsible for different parts of their work. The evening before the assignment is supposed to be sent to the teacher, one of the students discovers that a major part of the other student's text has been plagiarized from a website. The student who discovers this decides not to tell the other student or the teacher on the course.

To what extent do you consider that the student who is not telling is cheating?

Not at all 0-1-2-3-4-5-6 To a very high extent.

5) A course is examined through a take-home assignment. It is clearly stated in the instructions that the assignment is to be done individually. In spite of this, two students choose to cooperate by dividing up the tasks in the take-home assignment between them and then exchanging answers.

To what extent do you consider that the two students are cheating?

Not at all 0-1-2-3-4-5-6 To a very high extent

6) A student is supposed to complete a written take-home assignment in order to pass the course. The student consults a teacher who is not involved in the course but is teaching the same subject and asks how to do the assignment. The teacher helps the student with the answer to the question.

To what extent do you consider that the student is cheating?

Not at all 0-1-2-3-4-5-6 To a very high extent

Two of the six scenarios were manipulated (scenario 1 and 3); different background information about the person in the scenario was given in the text. The different information (manipulations) in the scenarios was given to 7 groups of participants (independent groups). The manipulations in scenario 1 and 3 are shown in table 1.

Table 1. Description of manipulation variables to scenario 1 and 3

Scenario 1, group examination	Scenario 3, copying text without using citation
Manipulations	Manipulations
a. Control, no extra information is given (see scenario 1 and 3 above).	a. Control, no extra information is given (see scenario 1 and 3 above).
b. Gender, man.	b. Gender, man.
c. Gender, woman.	c. Gender, woman.
d. Reading difficulties (dyslexia).	d. Reading difficulties (dyslexia).
e. Reading difficulties, student from another ethnic background having some difficulties writing in Swedish.	e. Reading difficulties, student from another ethnic background having some difficulties writing in Swedish.
f. Educational level, student from family with much experience of university studies.	f. Educational level, student from family with great experience of university studies.
g. Educational level, student from family with no experience of university studies.	g. Educational level, student from family with no experience of university studies.

Each group received their own manipulation variable. For instance, in the first group, which functioned as a control group, no manipulations were made in the scenarios. As this group did not receive a manipulation in scenario 1, they did not receive it in scenario 3 either. The manipulation for the second group was “gender man” in scenario 1 and in scenario 3. The third group received “gender woman” for scenarios 1 and 3 and so on. For scenarios 2, 4-6 no manipulation regarding background information was made for any of the groups. Our ambition was to make the manipulation as discrete as possible. For example, in scenario 1, a manipulation regarding gender would be in the form of the sentence /...A woman in the group does not contribute to the work, and is

often missing the group discussion.../ or /...a man in the group does not contribute to the work, and is often missing from the group discussions.../ To be able to compare whether the background information affects the participants' judgment, none of the seven groups knew that there were different versions of the questionnaire, with different manipulations included in the scenarios.

## **Statistical analysis**

To measure whether background information (gender, ethnicity, study experience etc.) about the people in the scenarios might affect the teacher and student judgments regarding the gravity of the misleading behavior, MANOVA, 2 x 7 Factorial MANOVA and ANOVA analyses were carried out using SPSS version 18 for Windows. To measure if there was a difference between the students' and teachers' opinions about cheating a t-test for independent groups was used. We also did an ANOVA to analyze if there were any differences in judgment between the manipulations for the entire group.

## **Results**

In order to investigate the aim and the research questions, the presentation of the results is divided into three sections. A number of statistical abbreviations are used, for example F (the value of the test), which stands for the variance of the group means / mean of the within-group variances, P which stands for the probability of obtaining a result at least the same as the one that was actually observed, and  $\eta^2$  which is a measure of effect size, which measures the strength of the relationship between two variables.

### **Are there any differences between teacher and student judgments of the behavior in the scenarios?**

In Table 2, the teachers' and students' mean and standard deviation regarding their judgment of the scenarios are presented. For scenario 1 and 3, we used only information from the control group, which received no manipulations and hence the number of teachers and students was reduced to 21 and 17 respectively. The results from the other scenarios were based on the total sample (N = 249). Significant differences were found regarding scenario 2, 4-6. In general, the students judged the scenarios more lightly, whereas the teachers as a group tended to judge the scenarios more severely. One reason for scenario 1 and 3 proving not to be significant (teachers and students) may be that the number of participants in the analyses was not sufficient to provide a statistical significance.

Table 2. Presentation of numbers (n) mean (m), standard deviations (sd) and mean rank (mr) regarding the teacher and student judgments on the degree of cheating presented in the scenarios. The significance testing was performed using Mann-Whitney U-test

Scenarios		n	m	sd	mr	U
Group examination	Teacher	21	4,24	1.70	20.16	
	Student	17	4.29	1.31	20.92	
$\eta^2 = .01$	Total	38	4.26	1.52	-	-0.21ns
Reference to primary source, but used secondary source	Teacher	118	2.81	1.77	140.21	
	Student	131	1.98	1.65	107.53	
$\eta^2 = .06$	Total	249	2.36	1.75	-	- 3.65***
Taking text without quoting or making a reference	Teacher	21	5.67	0.66	21.50	
	Student	17	5.24	1.09	17.03	
$\eta^2 = .04$	Total	38	5.47	0.89	-	-1.47 ns
Not telling the teacher that someone has “lifted” a text	Teacher	118	4.46	1.54	139.10	
	Student	131	3.75	1.88	112.09	
$\eta^2 = .04$	Total	249	4.07	1.77	-	-3.02**
Dividing examination questions, when it is forbidden	Teacher	118	5.38	0.99	146.18	
	Student	131	4.43	1.61	101.73	
$\eta^2 = .11$	Total	249	4.86	1.44	-	- 5.26***
Receiving help from a teacher	Teacher	118	2.98	1.97	130.37	
	Student	131	2.36	2.03	112.87	
$\eta^2 = .02$	Total	249	2.64	2.02	-	-1.97*

Does background information about the person in the scenario affect the students' and teachers' judgment of the degree of cheating in the behavior in the scenario?

The analysis was done by using a 2 (teacher or student) x 7 (the number of manipulations in the scenarios) factorial ANOVA, one for each of the two

scenarios, in order to keep the experimental error at the level of .05. Hence we did not analyze the data in several univariate analyses such as in the Mann-Whitney U-test, even though the number of subjects in some of the groups was rather low. Therefore, the result must be interpreted with some caution. The result is presented in Table 3.

The results of the analysis reveal significant differences between the teacher and student judgments of the degree of cheating in the group examination ( $F = 5.00$ ;  $p < .05$ ;  $\eta^2 = .02$ ) and for taking texts without using quotation marks or providing a reference ( $F = 10.54$ ;  $p < .01$ ;  $\eta^2 = .04$ ). In scenario 1, the students judged the misleading behavior as more serious than the teachers did; whereas in scenario 3, the teachers judged the misleading behavior as more serious

**Table 3. Teacher and student judgments regarding the seriousness of cheating behavior distributed between the scenarios**

Group examination, scenario1	Judgment teachers			Judgment students			F
	n	m	sd	n	m	sd	
Control	21	4.24	1.70	17	4.29	1.31	
Man	15	3.73	2.05	20	4.95	1.32	
Woman	19	3.37	2.09	18	4.11	1.64	
Reading and writing difficulties	12	3.83	1.64	18	3.72	1.74	
Other ethnic background with some language difficulties	24	3.54	2.02	20	3.35	2.03	
Much? experience of university studies from home	17	3.12	2.00	18	3.83	1.58	
No previous experience of university studies from home	10	2.80	1.87	20	3.95	1.36	
Total	118	3.57	1.93	131	4.03	1.63	5.00*

Taking text without quoting or making a reference, scenario3							
Control	21	5.67	0.66	17	5.24	1.09	
Man	15	5.33	0.90	20	5.20	1.28	
Woman	19	5.16	1.26	18	4.78	1.40	
Reading and writing difficulties	12	5.67	0.49	18	5.11	1.18	
Other ethnic background with some language difficulties	24	5.75	0.90	20	5.10	1.07	
Much? experience of university studies from home	17	5.71	0.59	18	5.72	0.57	
No previous experience of university studies from home	10	5.60	0.52	20	4.65	1.53	
Total	118	5.56	0.84	131	5.11	1.22	10.54**

compared to the students. However, there were no significant differences between the groups who received different background information (manipulations) about the subjects in the scenarios. When we controlled for the variables teacher and student, the only tendency to differences between the manipulations was found for taking text without using quotation marks or providing a reference ( $p = .08$ ). Additionally, we did an ANOVA to analyze if there were any differences in judgment between the 7 manipulations for the entire group (teachers and students together) regarding scenarios 1 and 3. We found significant differences ( $F = 2.282; 6,243; p < .05; \eta^2 = .05$ ) for scenario 3 (copying text without indicating citation). The group's means and standard deviations are presented in Table 4.

**Table 4. The entire group's number (n) mean (m) and standard deviations (sd) distributed between the manipulations**

Manipulations Scenario 3 (Copying text without using citation)	n	m	Sd
Control	38	5.47	0.89
Man	35	5.28	1.11
Woman	37	4.97	1.32
Reading and writing difficulties	30	5.33	0.99
Other ethnic background with some language difficulties	44	5.45	1.02
Much experience of university studies from home	35	5.71	0.57
No previous experience of university studies from home	30	4.97	1.35
Total	249	5.32	1.08

By looking at Table 4, it can be concluded that the judgment of the degree of cheating has the highest mean for the manipulation “coming from a home with much experience of university studies”, and the lowest mean for the manipulation of “woman” and “no previous experience”. However, the result must be interpreted with some caution because of the small number of participants in the groups.

**Is there any difference between the students' and teachers' opinions about cheating done on purpose or not and how common it is?**

For this analysis, a t-test for independent groups was used. No significant differences were found between student and teacher judgments of cheating done on purpose or not (teachers  $m = 3.23$ ,  $sd = 0.80$  and students  $m = 3.27$ ,  $sd = 0.85$ ). Furthermore, the analysis did not reveal any significant differences between teacher and student judgments of how common cheating in academic situations is (teachers  $m = 2.32$ ,  $sd = 0.09$ ; and students  $m = 2.33$ ,  $sd = 1.13$ ).

Finally, the data showed, as mentioned above, plenty of variation between judgments. Although the teachers on average tended to judge the behavior in the presented scenarios as more serious cheating behavior, far from all students had a more liberal view on cheating. In scenario two, 22% of the students rated the behavior as more serious compared to the average teacher's rating. In scenarios 4, 5 and 6, the numbers were 21, 0 and 33 %.

It was also found that some teachers were more liberal than the average student. In scenario two, 25 % of the teachers were more liberal compared to the

average student's rating. In scenarios 4, 5 and 6, the numbers were 24, 17 and 31 %.

## Discussion

The aim of the present study was to investigate teacher and student judgments of misleading behavior in relation to academic achievements and also to analyze whether background information such as gender, ethnicity, study experience, etc. regarding the person in the scenario, had any effect on the teachers' and students' perception of the seriousness of the behavior. The study indicates that there is a general tendency for teachers to judge the behaviors in the scenarios as more serious examples of misleading behavior compared to the students. However, there is one exception: in scenario 1 (the group examination), the students judge the misleading behavior as more serious than the teachers do. This difference was, however, not statistically significant. One plausible explanation for the students' higher mean may be that from a student perspective, the group will be disadvantaged if one person does not contribute to their work, something that will have a negative impact on the rest of the group. From a teacher perspective, on the other hand, it will not carry the same importance. In the other five scenarios, the behavior will give the student some advantages if the behavior is not revealed. Another explanation may be that students as a group have insufficient knowledge about the rules regarding misleading behavior and therefore judge these scenarios as less serious than the group of teachers, which would be consistent with the interpretation of the results found in Babic's (2005) study.

Another conclusion to be drawn from the study is that the difference between the teacher and student judgments regarding the seriousness of the behavior presented in the scenarios seems to be more important than the background information that is given in the scenarios. When we analyzed the entire group, we found small, but significant, differences between the 7 manipulations for scenario 3. This can be explained by the fact that increasing the number of participants in the groups by lumping together teacher and student judgments also increases the power of the test, which makes it easier to find significant differences. However, when we analyzed the teacher and student responses separately, we did not find any significant differences between the 7 manipulations. We think this is a positive finding since it implies that background information does not have an effect on the judgment of the behavior, at least not when the participants are answering a questionnaire. However, a tendency was found among students enrolled on the teaching program, who appeared to be more affected by the background information provided than the university teachers. It is possible that the difference would

have been clearer if the sample had been sufficiently large. Even though we want to be careful about jumping to conclusions, a plausible suggestion for how to interpret this tendency is that the experienced teacher might be less affected by the different circumstances that may play a role in the student's decision to cheat. A person with less experience would try to use the background information as a "cue" for taking action, instead of relying on facts and regulations. It may therefore be important to educate new teachers in matters regarding misleading behavior: how common it is, but also what rules and regulations there are.

No significant differences were found between students and teachers concerning their view that plagiarism may be committed intentionally. Both groups had a mean score of around 3.2 indicating that they believed that plagiarism is "sometimes" committed by a student without knowing that it is wrong. This result is consistent with previous findings by Widén and Bohlin (2007), indicating that a common belief among teachers and students is that plagiarism is seldom or never intentional. The most interesting finding in this study is perhaps that there is plenty of variation in the judgments both among teachers and students, indicating that there are different views within the groups on the definition of misleading behavior. Although teachers on average tended to judge the scenarios as more serious examples of misleading behavior, about 20% of the students were found to judge the scenarios as more serious than the average teacher. Additionally, about 20% of the teachers judged the scenarios as less serious in comparison to the average student. This result may indicate that there is no consensus among teachers or students about where to draw the line for misleading behavior. This result is a bit depressing from a security or quality perspective of academic work. There appears to be an inconsistency regarding the definition of misleading behavior among students *and* teachers. For example, in scenario 2 (reference to primary source without reading the primary source) the standard deviation for teachers is even larger ( $sd = 1.77$ ) than for students ( $sd = 1.65$ ), indicating some uncertainty in both groups. For taking a text without using quotation marks or providing a reference (scenario 3), the group of teachers has a smaller standard deviation ( $sd = 0.66$ ); whereas students have more variation ( $sd = 1.09$ ), indicating that students are somewhat more insecure about how serious plagiarism really is. The larger standard deviation in the student group can probably be explained by aspects such as lack of knowledge about how to use references correctly in written academic texts. This might be explained by the finding of Abasi, Akbari and Graves (2006) that students exhibit different levels of awareness of the available and privileged identity options in the social contexts of writing and this can be seen as an issue of authorial identity construction.

According to Nilsson et al (2007), we have to realize that there may also be competing views on how to work with other people's texts correctly and how to avoid plagiarism. Our result supports this idea, and therefore we believe that there is a need for educating both students and teachers regarding academic writing, how to provide references correctly, etc. Maybe these basic rules in academic work have been forgotten or have become less prioritized somewhere along the line. Reasons for this could be larger student groups, less teaching time, and a need to make sure that as many students as possible pass through the system in order to keep the budget of the university in balance. But what will the effect be in terms of quality of education, and in the long run, of reaching the goal of having well-educated people capable of critical thinking?

Another possible explanation for the difference between student and teacher judgments of misleading behavior can be group belonging. As Tajfel (1982) suggests, an in-group is a social group towards which an individual feels loyalty and therefore may wish to act in accordance with the group norm. It is possible that students in this sample may view other students as an in-group, and teachers as an out-group and vice versa. As a consequence, the two groups may respond somewhat differently to the questionnaire in order to act in accordance to "their" group norm, e.g. teachers in general judge the behaviors in the scenarios more strictly than students do in order to act in accordance to a stricter norm.

## **Methodological considerations**

There are some limitations to the study that need to be discussed. First of all, we used a design where independent groups were used to make judgments about the degree of cheating in the scenarios. One could argue that it is difficult to compare groups with different individuals since the differences between the groups cannot necessarily be attributed only to the manipulation, but also to the individual differences, which has nothing to do with the manipulation.

However, a design where every person makes judgments on the same scenarios with all manipulations would not be possible, since the purpose of the study would then be obvious. It is necessary that the manipulations are made without revealing the purpose to the participants. Since the manipulations were randomized within the group of respondents, the within-group variance is not necessarily a major problem, since the measurement errors would be normally distributed as long as the sample size is sufficient. However, the dropout rate among the groups of teachers (50%) is problematic; we believe that the reason for this can be that the subject is delicate to teachers, even though we guaranteed total confidentiality. The number of dropouts leaves us with a smaller sample, which makes it problematic to do multivariate statistical analyses. Even though the sample size is limited, we used multivariate analyses

such as ANOVA. The reason for this was to keep the experimental error at the level of .05. If we had used univariate analyses, the experimental error rate would have increased with 5% for each comparison. For instance, when analyzing group differences on the six scenarios, the experimental error rate would have been 30% instead of 5%. In addition, separate univariate tests are generally less powerful because they do not take into account the inter-correlation of the dependent variables (Grimm, & Yarnold, 1993; Huberty & Olejnik, 2006). From this perspective, it is better to use multivariate analyses instead of non-parametric tests, even though it is better to use non-parametric tests on small samples.

A problem with using scenarios is that they can be interpreted somewhat individually, which will increase the measurement error and thereby affect the reliability of the study. We deliberately made some of the scenarios easy and some of them more difficult to judge, in order to make the subject of cheating and plagiarism more problematic. Although, in the present study, we have defined cheating and plagiarism as “misleading behavior,” we nevertheless use the term “cheating” in the questionnaire. The reason for this is that “cheating” is the term used in colloquial language and because “misleading behavior” has legal connotations. However, regardless of which term was used, it might have biased the responses in the study in another direction than the bias in using the term “cheating.” Defining the area of misleading and cheating behavior is difficult, hence, so is the use of correct terms. We do however clarify the specific behavior in each scenario, so that the participants are able to make accurate assessments consistent with their perception. Another interesting issue is the reaction from some of the teachers who claimed that they needed more information than was given to be able to judge if the person in the scenario was cheating or not. This clearly indicates that misleading behavior is not always an easy issue.

## **Conclusion**

According to the Swedish National Agency for Higher Education (Högskoleverket, 2006), cheating is always an intentional act. This statement may be called into question since our findings indicate that there is a great variance in both student and teacher judgments of examples of misleading behavior (not only the scenarios about plagiarism, but also those dealing with cheating), that may be in a “grey-zone,” a result that is also supported by Hult and Hult (2003). We would argue that cheating in fact in some cases can also be unintentional. For instance, a student who uses avoidance of responsibility (scenario 1) in an academic situation could in fact use the same strategy in everyday life for handling problems/situations in general, and the act is therefore unintentional. Subjective opinions seem to play an important role

when judging what misleading behavior is in academic situations; they are possibly regarded as more important than actual knowledge of rules and regulations. We therefore find it of the utmost importance to bring forward a discussion about how both students and teachers view cheating and plagiarism in order to make people more familiar with the existing regulations and thereby create a more secure learning environment. It is also important, as Nilsson (2008) stresses, to discuss students' ethics and their use of technology and that this use is generally met with suspicion. Universities and the knowledge produced there encourage the use of technology, but it is seen with suspicion. Hence, the pedagogical examination forms are not adjusted to new ways of seeking information.

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