FACT

21 tips for IDE design coaches to help students improve Form & Language, Argument and Coherence in their Texts.

A guide to effective academic communication

Stella Boess & Lise Magnier

FACT: a guide to effective academic communication.

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21 tips for IDE design coaches to help students improve Form & Language, Argument and Coherence in their Texts.

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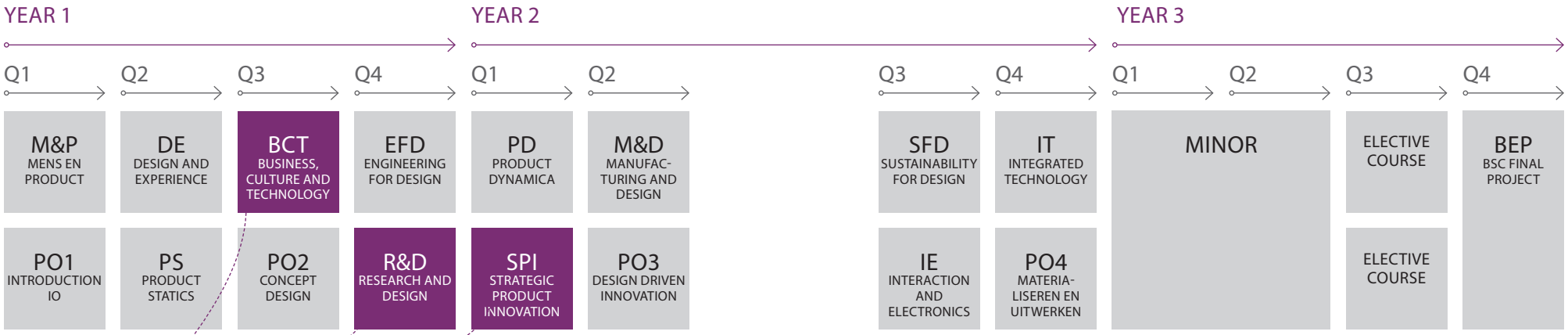

Three courses during the IDE Bachelor that actively teach academic writing skills are:

BCT BUSINESS, CULTURE AND TECHNOLOGY
R&D RESEARCH AND DESIGN
SPI STRATEGIC PRODUCT INNOVATION

Based on the 2016 schedule.

Introduction

Dear coaches,

With this guide, we aim to support you in teaching and evaluating academic writing in the IDE Bachelor programme at the faculty of Industrial Design Engineering. The guide presents 21 tips on three aspects of academic writing (form & language, argument and coherence). The students should master these aspects to write effectively. Take a look – we hope the tips provide answers to questions you have often had in teaching and evaluating students' writing.

Each tip is related to one or several criteria covered in three core courses during the IDE Bachelor (i.e. BCT, R&D and SPI) that actively teach academic writing skills. We structured these criteria to create a coherence academic writing line for our faculty, picking up from earlier work by Laurent Willemsen. The students are expected to make use of these skills in their other courses too, such as the PO courses. You can find an overview of the criteria in the first part of this guide.

You can use these tips to tailor your feedback to students' needs. The tips are presented in the form of how-tos and are usually complemented with examples. When possible, they are followed by a list of useful resources for more information on the topic.

We hope you enjoy using this guide! We would be happy to hear your feedback and incorporate it into future iterations.

Lise Magnier and Stella Boess

A note: it is TU Delft policy to require all student writing to use a recognised academic style for text and references. An example is the American Psychological Association (APA) style. This set of tips uses the APA style. It is the most common academic writing style in use in the social sciences.

Contents

Academic writing line

ATTAINMENT LEVELS IN THE BSC

To create the academic writing line, we divided academic writing skills into three aspects. Below you see the level a student should attain within each aspect during the Bachelor at IDE in order to be able to write a good report.

FORM & LANGUAGE

- Familiar with different types of reports and their audience (design / business / research report)
- Compiling a reference list that follows the APA guidelines
- Writing a text free from distracting spelling and grammar mistakes
- Writing in an academic writing style

ARGUMENT

- Assessing the value of sources
- Assessing the relative value of own method and claims and other sources
- Writing persuasively
- Justifying the relevance of a claim for its context

COHERENCE

- Coherence in the text:
  - Coordinating sentences
  - Using topic sentences
  - Bridging chapters in a logical way
- Distinguishing between essential and secondary information

The following three pages provide you with an overview of what is taught and evaluated in the three core writing-related courses in the IDE Bachelor (based on a review realised in 2016). Some criteria are consistently assessed in the same way, while we have divided other criteria into three levels, rising in attainment level. At the beginning (level 1), students prefer to rely on you for guidance and assessment. Later, as the students develop competence (level 3), you become a sparring partner for them in discussion.

- Level 1: learning basic skills and techniques, memorizing rules.
- Level 2: applying the techniques in tasks of increasing scope and complexity.
- Level 3: employing the techniques in a reflected and competent way.

LEGEND FOR THE NUMBERING OF CRITERIA

BCT Fa1	Student is familiar with the form requirements of a business report.

BCT	The course in which this criterion is used.
F	Aspect to which the criterion belongs. For example F = Form & Language.
a	Running number of the criterion (a, b, c, etc.)
1	Level of the criterion. We set these to run from 1 to 3 in the IDE Bachelor.

	MAIN CRITERIA	SUB-CRITERIA		TEACHING ACTIVITIES	EVALUATION ACTIVITIES
FORM & LANGUAGE	Familiar with different types of reports and their audience	Fa1	Student is familiar with the form requirements of a business report.	1. APA guidelines website 2. Manage resources in Microsoft Word 3. Report writing tips 4. Examples study 5. Self-study & Group work & coaching session	1. Grade students' practice by means of 3 group assignments & 1 individual assignment 2. Team performance evaluation 3. Grade exams
		Fb1	Student is aware of the needs of the report's audience.		
	Compiling a reference list that follows the APA guidelines	Fc1	Student knows what plagiarism is in academic writing.		
		Fd1	Student compiles a reference list that follows the APA guidelines.		
		Fe1	Student refers to sources in text using APA referencing.		
	Writing a text free from distracting spelling and grammar mistakes	Ff1	Student writes a Dutch text free from distracting spelling and grammar mistakes. (Not addressed in this guide).		
	Writing in an academic style	Fg1	Student is familiar with an academic writing style based on the APA guidelines.		
ARGUMENT	Assessing the value of sources	Aa1	Student recognizes the difference in value between sources.	1. Guest lecture 2. Toulmin model 3. Report writing tips 4. Examples study 5. Self-study & Group work & coaching session	1. Grade students' practice by means of 3 group assignments & 1 individual assignment 2. Team performance evaluation 3. Grade exams
	Assessing the relative value of own method and claims and other sources	Ab1	Student can assess the relative value of their work (limitations) .		
	Writing persuasively	Ac1	Student realises that a text can serve a persuasive goal.		
COHERENCE	Coherence in the text: coordinating sentences using topic sentences bridging chapters in a logical way	Ca1	Student can evaluate their own text and those of others on their coherence on report level.	1. Report writing tips 2. Examples study 3. Self-study & Group work & coaching session	1. Grade students' practice by means of 3 group assignments & 1 individual assignment 2. Team performance evaluation 3. Grade from exams
		Cb1	Student is familiar with ways of writing a coherent text on report level.		
		Cc1	Student uses introductions and conclusions to create a coherent text on report level.		
	Distinguishing between essential and secondary information	Cd1	Student recognizes the difference between essential and secondary information.		

	MAIN CRITERIA	SUB-CRITERIA		TEACHING ACTIVITIES	EVALUATION ACTIVITIES
FORM & LANGUAGE	Familiar with different types of reports and their audience	Fa1	Student is familiar with the form requirements of a research report.	1. APA style examples (via TUD library website) 2. Lecture on: • using academic words • using sources • using software to manage sources 3. Writing a research proposal as a team 4. Discussion during coaching sessions based on 6 short written deliverables 5. Information literacy test (level 1)	1. Completeness of the proposal as to the required parts 2. Stylistic comprehensibility and clarity of writing 3. Grade on the short written deliverables with a G (good), S (sufficient) and I (insufficient)
		Fb2	Student's work complies with the form requirements of a research report.		
		Fc3	Student is aware of and writes the report for the audience's needs.		
	Compiling a reference list that follows the APA guidelines	Fd1	Student recognizes the necessity of attribution.		
		Fe2	Student applies the APA guidelines to prevent plagiarism.		
		Ff2	Student refers to sources in text and compiles a reference list that follows the APA guidelines.		
	Writing a text free from distracting spelling and grammar mistakes	Ff1	Student writes an English text free from distracting spelling and grammar mistakes.		
	Writing in an academic style	Fh3	Student evaluates their own and other students' writing on academic writing style based on the APA guidelines.		
ARGUMENT	Assessing the value of sources	Aa2	Student assesses the relative value of sources.	1. Lecture on: making and supporting a statement 2. Analyzing pilot data and concluding the pilot study 3. Online practical to evaluate and find relevant literature 4. Literature review of 8-12 scientific papers	1. Online information literacy test 2. Grade on the short written deliverables with a G (good), S (sufficient) and I (insufficient)
	Assessing the relative value of own method and claims and other sources	Ab2	Student recognizes the limitations of their own method and claims.		
	Writing persuasively	Ac2	Student is familiar with ways to write a persuasive text.		
	Justifying the relevance of a claim for its context	Ad1	Student uses the report to demonstrate their understanding of the course theory.		
COHERENCE	Coherence in the text: coordinating sentences using topic sentences bridging chapters in a logical way	Ca2	Student evaluates their own text and those of others on coherence on report and paragraph level.	1. Lecture on: coherence on report level 2. Writing a research proposal within a team 3. Discussion during coaching sessions based on 6 short written deliverables	1. Originality of the proposal 2. Completeness of the proposal as to the required parts 3. Grade on the short written deliverables with a G (good), S (sufficient) and I (insufficient)
		Cb2	Student writes a coherent text on report and paragraph level.		
		Cc2	Student uses topic sentences to write a coherent text on report and paragraph level.		
	Distinguishing between essential and secondary information	Cd2	Student writes in a way that distinguishes between essential and secondary information.		

	MAIN CRITERIA	SUB-CRITERIA		TEACHING ACTIVITIES	EVALUATION ACTIVITIES
FORM & LANGUAGE	Familiar with different types of reports and their audience	Fa2	Student's work complies with the form requirements of a business report.	1. A pdf-leaflet with the general TU Delft information on plagiarism 2. Coaching sessions 3. Self-study and exam 4. Purdue Online Writing Lab (n.d.) Information literacy test (level 2)	1. Deliverable evaluated: Report in the right form, especially in relation to reference, figures, tables & visualization 2. Precision and clarity in the terms students use 3. Evaluation of the posters and the advice students provide to the company
		Fb3	Student is aware of and writes the report for the audience's needs.		
		Fc2	Student applies the APA guidelines to prevent plagiarism.		
	Compiling a reference list that follows the APA guidelines	Fd2	Student refers to sources in text and compiles a refer- ence list that follows the APA guidelines.		
		Fe2	Student names visuals and figures following the APA guidelines.		
	Writing a text free from distracting spelling and grammar mistakes	Ff2	Student writes an English text free from distracting spelling and grammar mistakes.		
	Writing in an academic style	Fg3	Student writes in an academic writing style based on the APA guidelines.		
ARGUMENT	Assessing the value of sources	Aa3	Student shows a critical stance with regards to the sources used.	1. Lecture on: • making and supporting a statement • gathering and using sources 2. Workshops 3. Coaching sessions 4. Purdue Online Writing Lab (n.d.)	1. Evaluation of the advice student provides to the company 2. Deliverable evaluated on: • Student combines information from different sources to support argumentation • Integrates information and sets up clear argumentation to arrive at meaningful and convincing conclusions
	Assessing the relative value of own method and claims and other sources	Ab3	Student is able to discuss the contribution and the limitation of their method, claim and other sources.		
	Writing persuasively	Ac3	Student uses the information gathered/ generated to convince the reader.		
	Justifying the relevance of a claim for its context	Ad2	Student uses the report to demonstrate their under- standing of the course theory.		
COHERENCE	Coherence in the text: coordinating sentences using topic sentences bridging chapters in a logical way	Ca3	Student writes a coherent text on report, paragraph and sentence level.	1. Lecture on: coherence at paragraph level 2. Group project 3. Coaching sessions 4. Purdue Online Writing Lab (n.d.)	1. Deliverable evaluated on: Composing a well-structured and coherent report. 2. For each source used, student is able to determine its relevance, validity, recency and bias.
		Cb3	Student evaluates their own text and those of others on coherence on report, paragraph and sentence level.		
	Distinguishing between essential and secondary information	Cc2	Student writes in a way that distinguishes between essen- tial and secondary information.		

Tips on Form and language

FORM & LANGUAGE CRITERIA

- Familiar with different types of reports and their audience (design / business / research report)
- Compiling a reference list that follows the APA guidelines
- Writing a text free from distracting spelling and grammar mistakes
- Writing in an academic writing style

Tip 1 How to differentiate between research, design and business reports

The three types of reports students write during the Bachelor and what they should contain are described below.

- Business report: describes a business case. It usually starts with an executive summary. The report contains an internal and an external analysis and focuses on the strategic aspects of design. It also contains references to relevant literature. The report concludes with strategic recommendations for decision-making.

- Research report: describes the purpose, the method and the results of a scientific research project. Students should emphasize the theoretical contributions and implications for practice. The typical structure of a research report consists of an abstract, an introduction, a method part, the results, a discussion and references.

CRITERIA CORRESPONDING TO TIP 1

BCT Fa1	Student is familiar with the form requirements of a business report.
BCT Fb1	Student is aware of the needs of the report's audience.
R&D Fa1	Student is familiar with the requirements of a research report.
R&D Fb2	Student's work complies with the form requirements of a research report.
SPI Fa2	Student's work complies with the form requirements of a business report.
R&D Fc3 & SPI Fb3	Student is aware of and writes the report for the audience's needs.

- Design report: describes a design process. The design report contains a problem definition and defines the context. Design iterations can be reported. The design is described and evaluated in terms of the design requirements, making reference to relevant literature. Students should emphasize recommendations and societal contributions.

Examples

- Business report: BCT and SPI reports
- Research report: R&D report
- Design report: PO3 and BEP reports

Tip 2 How to clearly refer to others' ideas

Please advise students early and often on how to cite and reference properly. This serves to increase the reader's confidence in a text by improving clarity and orientation. Failure to clearly indicate references to others' ideas often results in intentional or unintentional plagiarism. Plagiarism is a type of fraud and means that "the reader is unable to discern whether texts or images are original or reproduced" (TUD Library, n.d.). It arises when a student cites sources improperly. A study found three main reasons: bad time management on the student's part, ease of access to information that can be copied, for example from the internet, and the education set-up itself – unmotivated lecturers or overly theoretical assignments (Comas-Forgas & Sureda-Negre, 2010).

CRITERIA CORRESPONDING TO TIPS 2 AND 3

R&D Fd1	Student recognizes the necessity of attribution.
BCT Fc1	Student knows what plagiarism is in academic writing.
SPI Fc2 & R&D Fe2	Student applies the APA guidelines to prevent plagiarism.

Examples of citing

Original:
Faculty IDE, n.d.: "Stress, shortage of time, a missed lecture. There are numerous reasons why students allow themselves to be tempted to stretch the rules and start to commit fraud."

Plagiarism:
Student paper: "For students these days, stress, shortage of time or a missed lecture are some of the numerous reasons why students allow themselves to be tempted to stretch the rules."

Correct citing (paraphrasing):
Student paper: "The Faculty of IDE (n.d.) pointed out that a number of issues can lead to student plagiarism, including stress, time issues or missing a lecture."

Correct citing (quotation):
Student paper: "Plagiarism is a type of fraud and means that 'the reader is unable to discern whether texts or images are original or reproduced' (TUD Library, n.d.)".

Resources

http://studenten.tudelft.nl/en/students/faculty-specific/industrial-design-engineering/education/fraud-policy/forms-of-fraud-and-how-to-prevent-it/

Tip 3 How to search for relevant literature

Students should support their own statements with literature when they report on their work, regardless of which type of reporting it is. Doing a literature search enables them to acknowledge and build on what is already known about a topic in a given field of knowledge. Design is a transdiscipline: it has its own set of knowledge, but also draws on and contributes to other fields. Therefore, a design student should be able to decide:

- What existing knowledge can they draw on, and how can they contribute to it?
- What other field(s) can they draw on to deepen the knowledge?

Example:

- Design problem: Designing a truck cabin to improve the health problems of long-haul truck drivers.
- Forming research questions to contribute to solutions: what causes the health problems of long-haul truck drivers? What behaviours does the truck cabin support? Which behaviours could the truck cabin support in the context of the truck driver's life?
- What existing knowledge can the student draw on? On the basis of the research questions, select fields: design for behavioural change, psychology (behavioural change), truck cabin ergonomics, and knowledge about the daily life of truckers.
- How to search for literature?
  - Prepare around five keywords, such as: behaviour change, truck drivers, truck drivers' health problems, truck cabin design, and truck ergonomics.
  - Input combinations of these keywords into search databases (for example Google Scholar, Scopus).
  - Pick the five to ten publications that seem the most relevant (these are not always the first ones that show up; sometimes they can be found two pages down).
  - Browse the publications and their reference lists to get a sense of the key theories and insights in the fields studied.

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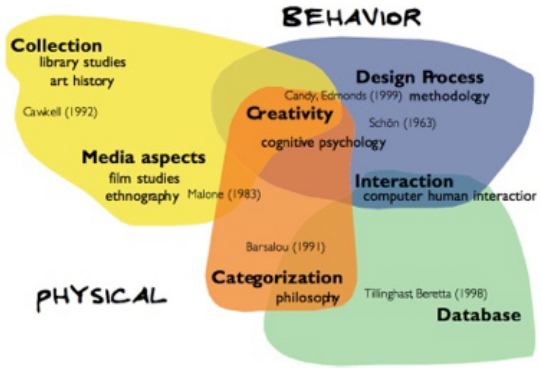

Figure 1. Example of the literature range surveyed by Ianus Keller for his PhD thesis about how designers use collections of images for inspiration (cited in Stappers, Sleeswijk Visser and Keller, 2015).

- Then, either contribute within those key theories or apply a theory from one field to another. For example, behaviour change for truck drivers – if nothing is available, apply knowledge on behaviour change from other design domains to the design domain of truck cabins.
- In some cases, the student needs to dig deeper and draw on other related fields, such as causes of obesity, fatigue and stress.

- How can the student contribute to the existing knowledge? When the student develops insights needed to design the truck cabin, these insights can contribute to knowledge. The design of the truck cabin itself can also be a contribution to knowledge (and could be written up for publication). The contribution will then most likely be in the design knowledge field (for example, contributing a case of design for behavioural change in trucks).

Resources

- The "information literacy" course at TU Delft is easily accessible and has different levels students can take. It helps students learn how to determine their information needs, search for information effectively and efficiently, assess information critically, and process and manage information. https://ocw.tudelft.nl/courses/information-literacy-i/ To access, just type "information literacy" into Coursebase and find a course that is open.
- Google Scholar: the quickest resource, but the student should realize that it does not contain everything. The student can find relevant literature there by searching for keywords. It is also useful for finding out who gets cited often in a specific field – these are probably important authors in that field. Find out how in Tip 4, next page.
- More sources, accessible via TU Delft library:
  - WorldCat Discovery: To search books and more in all scientific fields.
  - Scopus: To search for journal articles in all scientific fields.
  - DAAI: Design and Applied Arts Index database
  - ACM: The Digital Library of the Association for Computing Machinery. Many design-related sources.

Tip 4 How to format references automatically

The APA style requires a specific format for references, as do all other styles. This format enables the reader to easily find and verify sources. In order to prevent plagiarism, it is key to practice referencing with students early in the process of writing.

Tip 5 describes the principles of APA referencing. However, software packages (for example EndNote, Reference Manager, Mendeley, Zotero, Papersapp) and Google Scholar can help students to automatically format references in the APA style.

CRITERIA CORRESPONDING TO TIPS 4 TO 6

BCT Fd1	Student compiles a correct reference list that follows the APA guidelines
BCT Fe1	Student refers to sources in text using APA referencing.
R&D Ff2 & SPI Fd2	Student refers to sources in text and compiles a correct reference list that follows the APA guidelines.

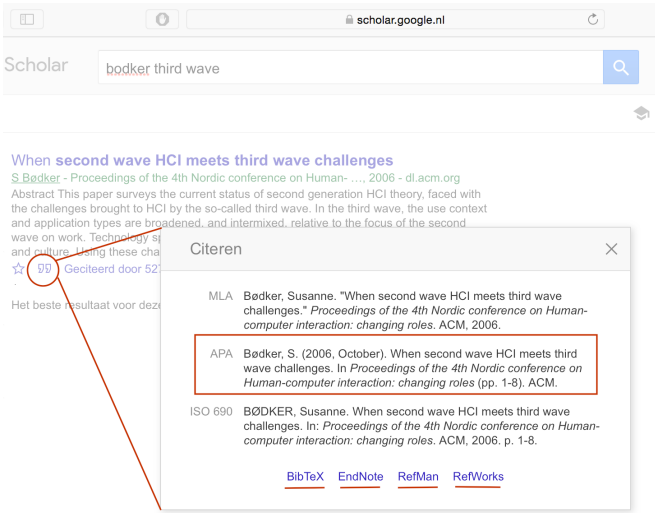

Figure 2. Picking up an automatically formatted reference from Google Scholar.

Example: www.scholar.google.com, search for keywords or an article or book.

- For example, if I vaguely remembered and searched for Susanne Bødker's article "When second wave HCI meets third wave challenges", I type in "bodker third wave" and Google Scholar shows the entry. I click " " at the bottom of the entry, and it shows the reference ready-made in a number of styles. I select APA and copy-paste the reference (see Figure 2).
- Note the buttons "BibTeX", "EndNote", "RefMan", and "RefWorks" at the bottom of the window. They enable students to import the reference directly into their software format (for example EndNote).
- Important: Students should always check whether the automatically generated reference is correct, for example in completeness and formatting! This is not always the case.

Tip 5 How to compile a correct reference list following APA guidelines

Students should use style guidelines such as those from the APA when compiling their reference lists:

- Reference list entries should be alphabetized by the last name of the first author of each work.
- Present the journal title in full.
- Italicize titles of longer works such as books and journals.
- Authors' names are inverted (last name first); give the last name and initials for all authors of a particular work for up to and including seven authors. If the work has more than seven authors, list the first six authors and then use ellipses after the sixth author's name. After the ellipses, list the name of the last author's name of the work.
- All lines after the first line of each entry in the reference list should be indented from the left margin for easier reading. This is called hanging indentation.

Depending on the format of the source, the APA formatting differs.

For books:

Example Csikszentmihalyi, M. (2013). Flow: The psychology of happiness. Random House.

For scientific articles:

Example Magnier, L., Schoormans, J., & Mugge, R. (2016). Judging a product by its cover: Packaging sustainability and perceptions of quality in food products. Food Quality and Preference, 53, 132-142.

For conference proceedings:

Example Govers, P. C., & Mugge, R. (2004, July). I love my Jeep, because it's tough like me: The effect of product-personality congruence on product attachment. In Proceedings of the fourth international conference on design and emotion. Ankara, Turkey.

For magazine articles:

Example Henry, W. A., III. (1990, April 9). Making the grade in today's schools. Time, 135, 28-31.

For newspaper articles:

Example Schultz, S. (2005, December 28). Calls made to strengthen state energy policies. The Country Today, pp. 1A, 2A.

For websites:

Example Angeli, E., Wagner, J., Lawrick, E., Moore, K., Anderson, M., Soderland, L., & Brizee, A. (2010, May 5). General format. Retrieved from http://owl.english.purdue.edu/owl/resource/560/01/

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Resources

- https://www.scribbr.nl/
- Helpful tips on how to use the APA style: The Purdue Online Writing Lab https://owl.english.purdue.edu/owl/resource/560/1/. When students go to that page, they should look at the 10 links in the left-hand menu (starting with "In-Text Citations: The Basics"). The links describe how to cite within a text and how to compile a reference list (including non-print sources such as personal communication, internet, TV broadcast).
- http://studenten.tudelft.nl/en/students/faculty-specific/tpm/rules-and-guidelines/referencing/faq/ (Tip: this is a really useful FAQ, with topics ranging from "how to cite websites" to "can I cite Wikipedia?")

Tip 6 How to refer to sources inside the text

Please draw the students' attention to the points below on how to refer to sources inside the text, for example in APA. The reference for a quotation should be placed directly after it. If not used in the sentence itself, they should put the reference at the end of the sentence.

A WORK BY TWO AUTHORS

Name both authors in the signal phrase or in the parentheses each time you cite the work. Use the word "and" between the authors' names within the text and use the ampersand in the parentheses.

Example

- Research by Wegener and Petty (1994) supports …
- Or (Wegener & Petty, 1994)

A WORK BY THREE TO FIVE AUTHORS

List all the authors in the signal phrase or in parentheses the first time you cite the source. Use the word "and" between the authors' names within the text and use the ampersand (&) in the parentheses.

Example

- Research by Kernis, Cornell, Sun, Berry, and Harlow (1993)
- (Kernis, Cornell, Sun, Berry, & Harlow, 1993)

In subsequent citations, only use the first author's last name followed by "et al." in the signal phrase or in parentheses.

Example

- Kernis et al. (1993) argued ...
- (Kernis et al., 1993)

A WORK BY SIX OR MORE AUTHORS

Use the first author's name followed by et al. in the signal phrase or in parentheses.

Example

- Harris et al. (2001) argued ...
- (Harris et al., 2001)

UNKNOWN AUTHOR

If the work does not have an author, cite the source by its title in the signal phrase or use the first word or two in the parentheses.

Example

("Using APA," 2001)

ORGANIZATION AS AN AUTHOR

If the author is an organization or a government agency, mention the organization in the signal phrase or in the parenthetical citation the first time you cite the source.

Example

› According to the American Psychological Association (2000), ...

If the organization has a well-known abbreviation, include the abbreviation in brackets the first time the source is cited and then use only the abbreviation in later citations.

Example

› First citation: (Mothers Against Drunk Driving [MADD], 2000)
› Second citation: (MADD, 2000)

TWO OR MORE WORKS IN THE SAME PARENTHESES

When your parenthetical citation includes two or more works, order them the same way they appear in the reference list (viz., alphabetically), separated by a semicolon.

Example

› (Berndt, 2002; Harlow, 1983)

TWO OR MORE WORKS BY THE SAME AUTHOR IN THE SAME YEAR

If your reference list includes two sources by the same author that were published in the same year, use lowercase letters (a, b, c) with the year to order the entries. Use the lowercase letters with the year in the in-text citation.

Example

› Research by Berndt (1981a) illustrated that ...

SECONDARY REFERENCE: WHEN CITING AN AUTHOR WHO CITES AN AUTHOR

Citing a source that you found in another source is called secondary referencing. Preferably, you should read and cite the original source. However, this is often not practical in the design field (for example, when a source cites a fundamental psychological or philosophical source). For example, if Harlow's work is cited in Berndt and you did not read Harlow's work, list the Berndt reference in the reference list. In the text, cite as follows:

Example

› Based on Harlow (1983) as cited in Berndt (2002), I chose the method of ...

Tip 7 How to refer to figures following the APA guidelines

Students should format and refer to figures according to the points below, for example in APA.

Please draw their attention to the following points:

- Number all figures.
- Give every figure a brief but clear and explanatory caption that points out what the reader should notice in the figure.
- Figure number and caption should be presented below the figure.
- Refer to all figures in the text.
  - Example: "Figure 3 shows that …" or "... (see figure 3)".

SPI Fe2	Student names visuals and figures following the APA guidelines.

Examples

Figures 3 and 4 follow the APA guidelines and are examples of how to present figures in a report.

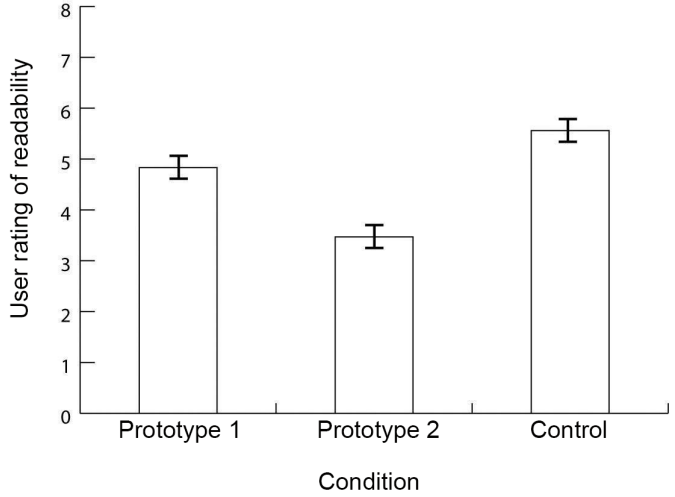

Figure 3. Mean users' readability rating of Prototype 1 and Prototype 2. Error bars represent standard errors.

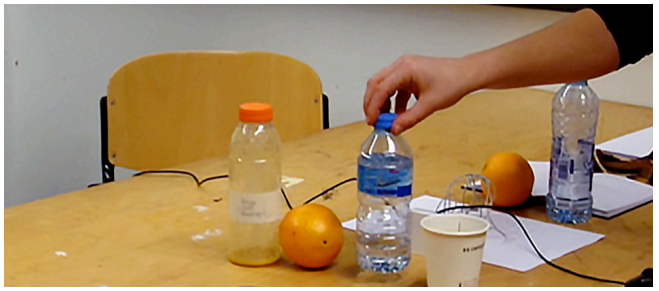

Figure 4. A participant interacting with an early prototype of a product-service system.

Tip 8 How to refer to tables following the APA guidelines

Students should format and refer to tables according to the points below, for example in APA.

- Number all tables
- Give every table a brief but clear and explanatory title
- Table number and caption should be presented above the table.
- Refer to all tables in the text.
  - Example: "Table X shows that …" or " … (see Table X)".

Example

Table 1 below follows the APA guidelines and gives a good example of how a table should be presented in a report. It fulfils the criteria above and has enough white space, is not cluttered and guides the eye well.

Table 1
Study 1: Measurements and descriptive statistics

	Raisins		Chocolate bars	
	Conventional package	Sustainable package	Conventional package	Sustainable package
Familiarity with the brand 1. Are you familiar with the brand presented on the package? (yes/no)	0% (no)	0% (no)	0% (no)	0% (no)
Packaging sustainability (r= .85) 1. This package is environmentally friendly 2. This is a good example of an environmentally friendly packaging	3.03 (1.62)	5.26 (.94)	2.27 (1.13)	5.18 (1.19)
Perceived healthiness 1. Eating raisins (chocolate bars) leads to positive consequences for health in the long run	4.34 (1.61)	4.44 (1.23)	2.16 (1.73)	2.41 (1.64)
Product quality (α = .76) 1. All things considered, I would say that these raisins (chocolate bars) are globally of: 'bad quality / excellent quality' 2. These raisins (chocolate bars) seem to have: 'a very bad quality / a very good quality' 3. Globally, this product seems: 'bad / excellent'	4.13 (.88)	4.57 (.94)	3.57 (1.16)	4.53 (1.11)

SD in parentheses

Resources

- The following link gives more information on how to refer to figures and tables: http://psych.utoronto.ca/users/reingold/courses/resources/handouts_apa/TablesFigures1.pdf

Tip 9 How to write well in an academic style. Part one: Use the active voice

Who is speaking in the report? It should be the student! In an effort to be objective, students often write in passive voice. For example, "a study was done" or "a decision was made". This is misleading and cumbersome to read.

The APA recommends to "use the active rather than the passive voice" (APA, 2010, p. 77).
The academic journal Science also recommends to use the active voice when suitable (Sciencemag, n.d.).

Please recommend to the students you coach to use the first person when reporting.

CRITERIA CORRESPONDING TO TIPS 9 AND 10

BCT Fg1	Student is familiar with an academic writing style based on the APA guidelines.
R&D Fg2	Student applies an academic writing style based on the APA guidelines.
SPI Ff2	Student writes an English text free from distracting spelling and grammar mistakes.
SPI Fg3	Student writes in an academic writing style based on the APA guidelines.

Examples

PASSIVE (AVOID)		ACTIVE (PREFERRED)
"The graduation student wrote this report."	>	"In this report, I present the project ..."
"A study was conducted in five households."	>	"I conducted a study in five households".
"To evaluate this possibility, a prototype was built"	>	"To evaluate this possibility, we built a prototype"

Tip 10 How to write well in an academic style. Part two: Level of formality

To write well in an academic style, students should pay attention to the level of formality they use in their texts. Please draw their attention to the following points:

- Aim for precision – avoid colloquial expressions that diffuse meaning

Example

Avoid: "it's nuts"
Preferred: "it is remarkable", or "given ... (for example earlier insights), it is unusual that ..."

- Write full words – avoid contractions

Example

Avoid: didn't, hasn't….
Preferred: did not, has not

Resources

Students can also find help using these resources:

- http://www.thesaurus.com/
- To learn words:
  - The Cambridge Guide to English Usage
- To learn better English:
  - Self-study: https://www.tudelft.nl/tbm/over-de-faculteit/afdelingen/stafafdelingen/itav/self-study-languages/self-study-english/
  - Courses at the Center for Language and Academic Skills (TBM): https://www.tudelft.nl/en/tpm/about-the-faculty/departments/staff-departments/centre-for-languages-and-academic-skills/education/english-unit/english-courses/

Tips on Argument

ARGUMENT CRITERIA

- Assessing the value of sources
- Assessing the relative value of own method and claims and other sources
- Writing persuasively
- Justifying the relevance of a claim for its context

Tip 11 How to assess the value of one's work

In design, students are sometimes tempted to think they should solve a problem perfectly. In reality, every design has advantages and disadvantages, and every insight applies to a specific context. A design effort should be efficient and effective for the goal it seeks to achieve. Students should specify the relative value of their insights and decisions in their reporting.

CRITERIA CORRESPONDING TO TIPS 11 TO 15

BCT Aa1	Student recognizes the difference in value between sources.
BCT Ab1	Student can assess the relative value of their work (limitations)
R&D Aa2	Student can assess the relative value of sources.
SPI Aa3	Student shows a critical stance with regards to the sources used.

Example

Non-preferred:

- Overly general: a student generates ideas, selects one and writes a page about the general, potential advantages and disadvantages of the idea.
- Biased: a student describes all the advantages of their selected design concept.

Preferred:

- Specific: a student generates ideas, selects three, conducts a simple, initial test of feasibility, refines ideas based on the results, and writes a page about the ideas, test set-up and results, and limitations such as the comparability with a real use situation.
- Objective: a student describes the advantages and disadvantages of their selected design concept in comparison with similar concepts, according to specified criteria.

Tip 12 How to argue design decisions. Part one: making a claim or statement

Students should be able to argue their design decisions in discussion or in writing. What is an argument? Its first part is a claim or statement, and there are different kinds (Beck & Stolterman, 2016).

Example

- A statement of value, such as "plastic is more appropriate than wood for this purpose".
- A statement of fact, such as "the production cost is 34.50 euro." Or, "blue scored best in the test".
- A statement of concept, such as "with this design I introduce the notion of 'tangible interaction'".
- Or a statement of interpretation, such as "users approached the new interface with cautious curiosity".
- Or lastly, a statement of policy, such as "designers should iterate more".

Inexperienced writers often resort to the last type, policy, seeking to convince through overconfidence (for example "it is essential to apply an extra coating" or "the best choice is concept b") without supporting their statements. If you encounter such a statement, challenge the student to turn it into one of the other types of statement (i.e. value, fact, concept, interpretation), and to support the statement (see tip 13).

Tip 13 How to argue design decisions. Part two: supporting a claim or statement

A text is convincing when it is built around well-argued claims or statements, because this gives readers context to judge the statements (Toulmin, 1958). Osborne (2010) argued that: "Argumentation is the means that scientists use to make their case for new ideas." Argumentation means discussing what a statement builds on, as well as the possible weaknesses and limitations of the new idea.

Bachelor students at the IDE faculty may not yet have fully developed critical thinking abilities and may sometimes still need simple delivery of knowledge. Nonetheless, engaging in argumentation helps improve their thinking and writing. Osborne (2010) argued that argumentation can be learned from an early age.

Students can use the Toulmin Model (see Figure 5) to structure and strengthen their argument (cf. BCT course).

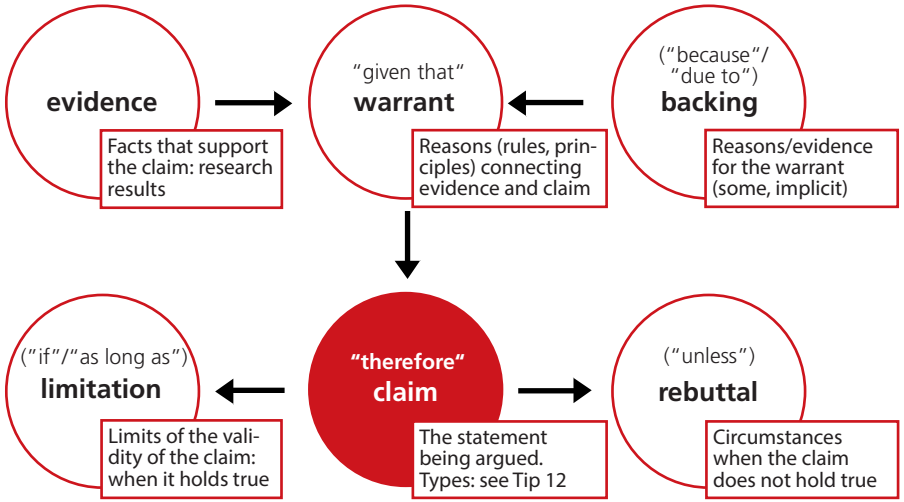

Figure 5. The Toulmin model of argument.

Example

This text is an example of a well-supported argument (based on the Toulmin model).

"To improve the break experience for students in the library, different interactions could evoke emotions and thus yield a potentially engaging experience (Bødker, 2006) (backing). The controllable nature installation I built in the university library is an example of providing such engagement: it engages students socially (claim). In a test of the installation, students mentioned feeling in control and enjoying the social experience (evidence). The installation thus has the effect of evoking the emotion of relief from the students' thinking tasks (warrant), facilitated by control and sociability – if they have access to it and to other students (limitation), and unless they stay fixated on their digital devices during their breaks (rebuttal)."

→

Resources

- https://owl.english.purdue.edu/owl/resource/588/03/
- http://grammar.ccc.commnet.edu/grammar/composition/argument.htm
- http://www.powa.org/convince/arguing-for-consensus.html
- Also recommended: do a Google image search on "toulmin" to see examples of visuals. To compare different kinds of writing, see also http://www.powa.org

Tip 14 How to assess the value of sources

Not all sources are of equal quality. It is therefore important for students to assess the value of the sources they use. Please draw their attention to the following points:

Question the sources.

Examples of strategies

- Who is the author?
- When was it written? Especially in the case of numbers, consider whether they are recent enough and still valid.
- Where does the information come from?
- Who has an interest in seeing this information published (bias)?

Question the sources of scientific literature as well.

Examples of strategies

- Who wrote it?
- Was it published?
  - Conference proceedings or journal paper? (Journal papers are usually considered as stronger sources.)
  - Which conference?
  - Was it peer-reviewed?
  - Which journal?
- What is the impact factor of the journal (compared to the median impact factor in the field)?
  - https://jcr.incites.thomsonreuters.com/JCRHomePageAction.action?
- Who is the publisher? Quality publishers: Elsevier, Wiley, Springer, Informa.

Tip 15 How to be critical towards the sources used

Being critical means investigating carefully to what extent the source can be trusted and used.

Examples (Manchester Academic Phrasebank, n.d.)

- Introduce the critical stance of particular writers: "Jones (2003) has also questioned why … However, Jones (2003) points out that …"
- Use evaluative adjectives to comment on research: "In her timely/seminal/thorough study/survey/analysis, Jones (2003) showed that …"
- Identify a study's weakness: "(However,) Jones did not consider the possibility of …"
- Introduce questions, problems and limitations (theory or method): "However, there are limits to how far the idea of/concept of X can be taken; One question that needs to be asked, however, is whether this method is suitable for …"

Resource

- http://www.phrasebank.manchester.ac.uk/being-critical/

Tip 16 How to get the reader interested

To be read, texts should be attractive to their audience. Students can use different strategies to catch the attention of their reader:

Students can use a striking opener, such as a startling number that describes the problem they are tackling.

Example

- "A million plastic bottles are bought around the world every minute."

CRITERIA CORRESPONDING TO TIPS 16 AND 17

BCT Ac1	Student realizes that a text can serve a persuasive goal.
R&D Ac2	Student is familiar with ways to write a persuasive text.
SPI Ac3	Student uses the information gathered/generated to convince the reader.

Students can use an example everyone can buy into. Their text should jump right into the topic, and an example works well for that purpose.

Examples (from student writing):

- "Do you know where your data goes after it left your own social media posting?"
- "Did you know one third of people end up getting a form of dementia?"
- Display a picture of a boardroom – "When the board faces the choice of investing 5 million euros in either concept A or concept B, how will they decide?"

Tip 17 How to write with precision and clarity

Texts written in an academic writing style should be clear and precise. Students can use several strategies to avoid misunderstanding and confusion among their readers:

- Every word in a report should mean exactly what the student is intending to say.
- When describing something, the same word should be used for it consistently.
- Aim for sentences of two or three related parts.

Examples

- Too short: I tested the prototype. All participants completed the task. They said that it was easy. It took them a long time.
- Just right: I tested the prototype and all participants completed the task. While they said that it was easy, it took them a long time.
- Too long: I tested the prototype and all participants completed the task, saying that it was easy, but taking a long time.

- General approximations of quantity are interpreted differently by different readers or in different contexts. Therefore, it is recommended to use actual quantities, ranges or specific approximations whenever possible.

Examples

- General approximations of quantity (Avoid): "quite a large part", "very few", "practically all"
- Actual quantities or ranges (Preferred): "between 50 and 100"
- Specific approximations (Preferred): "about 100"

Tips on Coherence

COHERENCE CRITERIA

- Coherence in the text:
  - Coordinating sentences
  - Using topic sentences
  - Bridging chapters in a logical way
- Distinguishing between essential and secondary information

Tip 18 How to give a clear structure to a report

The students should order each sentence and paragraph – and the report in general – for optimal clarity

Examples of strategies

- The students should make a plan when setting up a report: "In what order do you want to present your arguments?"
- Writing from an outline helps to preserve the logic of the argument. An outline identifies the main ideas and subordinate ideas, and helps the students to maintain discipline in their writing and to notice omissions.

Readers should understand what the student is presenting: the student should aim for continuity in words, concepts and thematic development from the opening statement to the conclusion.

CRITERIA CORRESPONDING TO TIPS 18 TO 21

BCT Cd1	Student recognizes the difference between essential and secondary information.
R&D Ca2:	Student evaluates their own text and those of others in terms of coherence at the report and paragraph levels.
R&D Cb2	Student is familiar with ways of writing a coherent text at the report and paragraph level.
R&D Cc2	Student uses topic sentences to write a coherent text at the report and paragraph level.
R&D Cd2 &SPI Cd2	Student writes in a way that distinguishes between essential and secondary information.
SPI Ca3	Student writes a coherent text at the report, paragraph and sentence level.
SPI Cb3	Student evaluates their own text and those of others on coherence at the report, paragraph and sentence level.

Each report, and each part of a report, should clearly relate to one statement (see above, tips 12 and 13).

Examples of strategies

- Putting aside the first draft for a period of time, then rereading it with fresh eyes.
- Asking a fellow student to critique the draft.

Tip 19 How to build connections between paragraphs/chapters of a text

Students should use introductions to build connections between chapters or paragraphs

Example

"After the principles of … have been outlined in Chapter 4 I will go into study … in more/greater depth"

Resources

- Butterman, D. (2009). English for High-Flyers (2nd ed.). Amsterdam: Boom. A word of warning in connection with introductions on page 159-160.

Tip 20 How to write a coherent text at the paragraph level

Please draw your students' attention to the following points:

Each paragraph should address only one topic.

Use topic sentence: A paragraph should start with a topic sentence. This sentence usually makes a statement that the remaining sentences will explain, discuss and elaborate upon.

Example

Consumers perceive several types of risks when considering the purchase of refurbished products.

→

Body of the paragraph: It discusses the key idea, using facts, arguments, examples and other information.

Use summary sentences: A paragraph may end with a summary sentence. It summarizes the information discussed in the paragraph.

Resource

- https://wts.indiana.edu/writing-guides/paragraphs-and-topic-sentences.html

Tip 21 How to write a coherent text at the sentence level

Students should use transitional words to achieve continuity and help maintain the flow of thoughts.

Examples

- Time links: then, next, after, while, since
- Cause-effect links: therefore, consequently, as a result
- Addition links: in addition, moreover, furthermore, similarly
- Contrast links: but, conversely, nevertheless, however, although, whereas

Resource

- https://wts.indiana.edu/writing-guides/paragraphs-and-topic-sentences.html

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