MASARYK UNIVERSITY
LANGUAGE CENTRE

ACADEMIC WRITING for international students (English programme)
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LESSON PLAN FOR SESSION 4:

1. FREE-SPEAKING WARM-UP

2. ABSTRACTS REVISITED: REFLECTION ON STUDENT WRITING – SUGGESTIONS FOR CHANGE

3. STUDENT PRESENTATIONS

4. INTRODUCTIONS TO RESEARCH ARTICLES: LANGUAGE AND STRUCTURE, TEXT ANALYSIS

5. GRAMMAR: COHESIVE DEVICES – LINKING EXPRESSIONS FOR SENTENCE STRUCTURE

7. FINAL SUMMARY, HOME ASSIGNMENT

E-learning:
https://is.muni.cz/auth/el/1411/jaro2016/aVLAW061/index.qwarp

PARAGRAPH SKELETON FOR INTRODUCTIONS

This excerpt comes from the beginning of an article, where a wide body of research is reviewed in an economical way so that the author can situate her own approach. Underline those phrases that you think you could use in your own writing. One example has been done for you.

[1] **The study builds on and contributes to work in** critical linguistics (Coulthard, 1996; Chilton, 1982; Fairclough, 1989; Seidel, 1985; Van Dijk, 1989, 1991; Wodak, 1989). [2] Although studies in critical linguistics have examined the discursive construction of past events, there has not been an extended study of the construction of a projected event. [3] As such, this study provides additional insight into the constructive processes of language by explicating the linguistic and rhetorical processes through which a projected—future—event is constructed as a discrete and autonomous state of affairs. [4] The analytic focus on a projected event enables another contribution. [5] This study analyzes how the political and social interests underlying accounts of the Iraq/Saudi Arabia projected event were rhetorically managed in *The New York Times (NYT*) and *Washington Post (WP)*. [6] Although numerous studies (Bruck, 1989; Clayman, 1990; Fairclough, 1992c; Fowler, 1991; Van Dijk, 1988, 1989, 1993; Zelizer, 1989) have identified sourcing (i.e., using spokespersons representing so-called elite groups and institutions as sources for information) as a constructive social and ideological practice, little analytic attention has been paid to the implications of this finding for how texts are linguistically constructed within newspaper discourse, a discourse context guided by the professional canon of objectivity, balance and neutrality. [7] I address this issue by demonstrating how assertions about a hypothetical future event attributed to a specific group of spokespersons were transformed into unmediated and presupposed information.

2.) *Questions:*

- Which sentence locates her analysis within a specific discipline?
- How and where does she signal a gap?
- How and where does she signal the contribution her study will make to the field?

3.) ***These are the phrases forming the skeleton of the article. Can you think of synonyms which could be used for some of the words? One example has been done for you.***

work research paper report survey article

1. The **study** builds on and contributes to work in _____.

2. Although studies in _____ have examined _____

   there has not been a/an _____.

3. As such, this study provides additional insight into _____.

4. The analytic focus on _____ enables another contribution.

5. This study analyses _____.

6. Although numerous studies ( ) have identified _____

   _____ ,

   little analytic attention has been paid to _____ .

7. I address this issue by demonstrating _____

   _____ .

4.) ***Use the paragraph skeleton and synonyms of your choice to write a short introduction of a research paper (research you have carried out or have already written about).***

5.) ***Read the introduction and answer the question below the article.***

Fraud in Medical Research:
An International Survey of Biostatistics

Ranstam, J. et al.
Controlled Clinical Trials, 21, 415-427.

(1) The public awareness of scientific fraud has increased remarkably since the late 1980s when a controversy made front-page news, in which a paper investigated for fraud had as co-author a Nobel laureate [1]. (2) During the 1990s scientific fraud was disclosed on numerous occasions [2]. (3) In fact, it was recently suggested that fraud now in "endemic in many scientific disciplines and in most countries" [3]. (4) However, the clandestine character and consequential lack of reliable information make it difficult to study scientific fraud. (5) The characteristics and frequency of scientific fraud, therefore, are generally unknown, and its impact on medical research is unclear.

(6) Biostatisticians routinely work closely with physicians and scientists in many branches of medical research and have unique insight into data. (7) In addition, they have the methodological competence to detect fraud and could be expected to have a special professional interest in the validity of results. (8) Biostatisticians therefore could provide unique and reliable information on the characteristics of fraud in medical research.

(9) The objective of this study was to assess the characteristics of fraud in medical research by surveying members of the International Society of Clinical Biostatisticians (ISCB).

Questions to discuss:

1. Underline all words and phrases in the first three sentences that help establish the research territory.

2. Identify all the linking words and phrases. What are their functions?

3. Where and how is the gap established?

CARS (Creating a Research Space): overview

John Swales' *CARS model for introductions* is based on his study of articles across a range of disciplines. He identified the following **moves** (that is steps, in other words) as common among most articles:

Move 1: Establishing a territory

Step 1 Claiming importance *and/or*

Step 2 Making topic generalizations *and/or*

Step 3 Reviewing items of previous research

Move 2: Establishing a niche (=gap)

Step 1a Counter-claiming *or*

Step 1b Indicating a gap *or*

Step 1c Question-raising *or*

Step 1d Continuing a tradition

Move 3: Occupying the niche (=gap)

Step 1a Outlining purposes *or*

Step 1b Announcing present research – *PISF= probable in some fields*

Step 2 Announcing principle findings – *PISF*

Step 3 Indicating article structure – *PISF*

RA INTRODUCTIONS: TEXT ANALYSIS

Work in groups and identify the individual moves/steps in the following medical article introductions. The introductions belong to recently published texts in the respective international medical or biomedical journals. Use may use colors to highlight the individual portions of texts.

TEXT A

Guidelines for the Management of Spontaneous Intracerebral Hemorrhage / American Heart Association

Intracerebral hemorrhage (ICH) is more than twice as common as subarachnoid hemorrhage (SAH) and is much more likely to result in death or major disability than cerebral infarction or SAH. 1 Although 315 randomized clinical therapeutic trials for acute ischemic stroke and 78 trials for SAH were complete or ongoing (oral communication, Cochrane Collaboration, May 16, 1995) as of 1995, only the results of 4 small randomized surgical trials (353 total patients) 2–5 and 4 small medical trials (513 total patients) 6–9 of ICH had been published. In these small randomized studies, neither surgical nor medical treatment has been shown conclusively to benefit patients with ICH. Advancing age and hypertension are the most important risk factors for ICH. 10 –15 ICH occurs slightly more frequently among men than women and is significantly more common among young and middle-aged blacks than whites of similar ages. 10,16 Reported incidence rates of ICH among Asian populations are also higher than those reported for whites in the United States and Europe. Pathophysiological change in small arteries and arterioles due to sustained hypertension is generally regarded as the most important cause of ICH. 11,12,14,17,18 Cerebral amyloid angiopathy is increasingly recognized as a cause of lobar ICH in the elderly. 19 –23 Other causes of ICH include vascular malformations, ruptured aneurysms, coagulation disorders, use of anticoagulants and thrombolytic agents, hemorrhage into a cerebral infarct, bleeding into brain tumors, and drug abuse. 10 Of the estimated 37 000 Americans who experienced an ICH in 1997, 35% to 52% were dead at 1 month; half of the deaths occurred within the first 2 days. 1,17,24 Only 10% of patients were living independently at 1 month; 20% were independent at 6 months. 10,24 Although guidelines for medical treatment and surgical removal of ICH are available, management of ICH by neurologists and neurosurgeons varies greatly throughout the world. 25,26 Despite a lack of proven benefit for surgery to remove an ICH, it is estimated that 7000 such operations are performed annually in the United States. 10 To address this understudied but common and devastating stroke subtype, the American Heart Association Stroke Council formed a task force to develop practice guidelines for the management of ICH and to suggest areas for future research. Task force members used the rules of evidence for specific treatments used by other panels (Table 1). These rules give greater credence to the results of well-designed clinical trials than anecdotal case reports or case series. The limited number of randomized controlled studies of treatment of ICH severely limit strong, positive recommendations for any intervention. Thus, these guidelines should be viewed as a basis for the development of future clinical trials, which are desperately needed.

TEXT B

Quantifying bedside-derived imaging of microcirculatory abnormalities in septic patients: a prospective validation study / Critical Care

Recent clinical investigations have identified microcirculatory abnormalities as a key component of the pathogenesis of sepsis [1,2]. These new insights have been mainly due to the introduction of orthogonal polarization spectral (OPS) imaging by Slaaf and co-workers [3], which uses green polarized light to observe the microcirculation in vivo. Implementing OPS imaging in a hand-held type of tool allowed us to observe the microcirculation of internal human organs for the first time [4,5]. The central role of microcirculatory abnormalities in sepsis was elucidated when OPS imaging was applied in critically ill patients. Microcirculatory abnormalities were found in septic patients by direct observation of the sublingual microcirculation by means of OPS imaging [6,7], and such abnormalities were found to be predictive in outcome [1]. An important issue in these investigations concerns the method of quantifying the OPS movies of microvascular structures, to identify flow abnormalities associated with sepsis, and evaluate its results. De Backer and co-workers [7,8] introduced a semi-quantitative method, based on the number of perfused vessels crossing three equidistant horizontal and vertical lines. We also developed a score, based on a slightly different principle [6]. Both methods require subjective assessment of flow to identify redistribution between different sized micro vessels, especially the capillaries. Although these methods have proven their worth in practice in identifying the nature of microcirculatory dysfunction in sepsis, neither method has yet been validated in terms of reproducibility. Furthermore, there is a need for a more general method of analysis, applicable to other microvascular structures with different architecture than the usually investigated sublingual vascular bed. In this study, we present a consensus method of semi-quantitative analysis of OPS imaging that is suitable for quantifying microcirculatory abnormalities in critically ill patients in different subsets of vascular beds: the sublingual region, villi of the small bowel and crypts of the colon. We validated this method for its interrater and intrarater variability and will discuss its potency for future automated analysis by means of software application.

TEXT C

A Third-Generation Lentivirus Vector with a Conditional Packaging System /Journal of Virology

Lentiviruses have attracted the attention of gene therapy investigators (45) for their ability to integrate into nondividing cells (8, 15, 16, 25, 26). We previously developed replication-defective vectors from the lentivirus human immunodeficiency virus (HIV) and showed that they transduce target cells inde-pendent of mitosis (32). The vectors proved highly efficient for in vivo gene delivery and achieved stable long-term expression of the transgene in several target tissues, such as the brain (5, 33), the retina (31), and the liver and muscle of adult rats (21). A major concern, however, is the biosafety of vectors derived from a highly pathogenic human virus. The complexity of the lentivirus genome may be exploited to build novel biosafety features in the design of a retrovirus vector. In addition to the structural gag, pol, and env genes common to all retroviruses, HIV contains two regulatory genes,tat and rev, essential for viral replication, and four accessory genes, vif, vpr, vpu, and nef , that are not crucial for viral growth in vitro but are critical for in vivo replication and pathogenesis (27). The Tat and Rev proteins regulate the levels of HIV geneexpression at transcriptional and posttranscriptional levels, respectively. Due to the weak basal transcriptional activity of the HIV long terminal repeat (LTR), expression of the provirus initially results in small amounts of multiply spliced transcripts coding for the Tat, Rev, and Nef proteins. Tat increases dramatically HIV transcription by binding to a stem-loop structure (transactivation response element [TAR]) in the nascent RNA, thereby recruiting a cyclin-kinase complex that stimulates transcriptional elongation by the polymerase II complex (46). Once Rev reaches a threshold concentration, it promotes the cytoplasmic accumulation of unspliced and singly spliced viral transcripts, leading to the production of the late viral proteins. Rev accomplishes this effect by serving as a connector between an RNA motif (the Rev-responsive element [RRE]), found in the envelope coding region of the HIV transcript, and components of the cell nuclear export machinery. Only in the presence of Tat and Rev are the HIV structural genes expressed and new viral particles produced (27). In a first generation of HIV-derived vectors (32), viral particles were generated by expressing the HIV type 1 (HIV-1) core proteins, enzymes, and accessory factors from heterologous transcriptional signals and the envelope of another virus, most often the G protein of the vesicular stomatitis virus (VSVG) (9) from a separate plasmid. In a second version of the system, the HIV-derived packaging component was reduced to the gag, pol, tat, and rev genes of HIV-1 (51). In either case, the vector itself carried the HIV-derived cis-acting sequences necessary for transcription, encapsidation, reverse transcription, and integration (2, 4, 22, 24, 29, 30, 32, 35). It thus encompassed, from the 5 9 to 3 9 end, the HIV 5 9 LTR, the leader sequence and the 5 9 splice donor site, approximately 360 bp of the gag gene (with the gag reading frame closed by a synthetic stop codon), 700 bp of the env gene containing the RRE and a splice acceptor site, an internal promoter (typically the immediate-early enhancer/promoter of human cytomegalovirus [CMV] or that of the phosphoglycerokinase gene [PGK]), the transgene, and the HIV 3 9 LTR. Vector particles are produced by cotransfection of the three constructs in 293T cells (32). In this design, significant levels of transcription from the vector LTR and of accumulation of unspliced genomic RNA occur only in the presence of Tat and Rev. Here, we demonstrate that the trans -acting function of Tat becomes dispensable if part of the upstream LTR in the transfer vector construct is replaced by constitutively active promoter sequences. Furthermore, we show that the expression of rev in trans allows the production of high-titer HIV-derived vector stocks from a packaging construct which contains only gag and pol. This design makes the expression of the packaging functions conditional on complementation available only in producer cells. The resulting gene delivery system, which conserves only three of the nine genes of HIV-1 and relies on four separate transcriptional units for the production of transducing particles, offers significant advantages for its predicted biosafety.

TEXT D

Brain-Derived Neurotrophic Factor and Obesity in the WAGR Syndrome / The New England Journal of Medicine

Studies in animal models suggest that brain-derived neurotrophic factor (BDNF) plays a key role in energy homeostasis.1- 6 BDNF is believed to act primarily within the ventromedial hypothalamus to regulate energy intake1,2 downstream of the leptin–proopiomelanocortin signaling pathway. 3,5 In mice, genetic BDNF haploinsufficiency leads to obesity. 7-10 Mice that are heterozygous for inactivated BDNF have a 50% reduction in hypothalamic expression of BDNF, and they have hyperphagia and obesity, which are reversed by intracerebroventricular infusions of BDNF.8-10 Although studies in animals provide support for a role of BDNF in energy homeostasis, data in humans are relatively limited. Some studies have shown an inverse association between the peripheral BDNF concentration and the body-mass index (BMI) (the weight in kilograms divided by the square of the height in meters) in children and adults.11-14 A common BDNF polymorphism, Val66Met, has been inconclusively associated with altered body weight. 14-17 The most relevant data are from two case reports. One described an obese child with hyperphagia and a heterozygous 11p13p15.3 inversion that resulted in what has been termed "functional" BDNFhaploinsufficiency (as determined from measurements performed in a lymphoblastoid cell line) 18 ; the other, more convincingly, described an obese child with hyperphagia and a heterozygous missense substitution resulting in impaired signaling of the cognate receptor of BDNF, TrkB. 19 Thus, the available data suggest the importance of BDNF in energy homeostasis in humans, but the evidence is not definitive. We therefore systematically investigated a naturally occurring model of genetic BDNFhaploinsufficiency in humans. This rare disorder is characterized by Wilms' tumor, aniridia, genitourinary anomalies, and mental retardation, and it is thus called the WAGR syndrome. It is caused by heterozygous contiguous gene deletions that involve at least two genes, W T1 and PA X6, which are present in the 11p13 region. These genes are positioned approximately 4 Mb centromeric to the BDNFlocus at 11p14.1 (Fig. 1A). Haploinsufficiency for W T1and PA X6 has been observed in all patients with the WAGR syndrome and accounts for the common oncogenic, ocular, and genitourinary features of the syndrome. Although persons with the WAGR syndrome typically have low-normal birth weight, 21 marked obesity subsequently develops in a substantial subgroup. Case reports involving single patients have described severe hyperphagia and obesity in a few persons with deletions that included the 11p14 BDNFlocus. Such reports have led to the hypothesis that BDNFhaploinsufficiency may be responsible for the obesity subphenotype of the WAGR syndrome. To test this hypothesis, we examined the relationship −between BDNFhaploinsufficiency and childhood BMI in children and adults with the WAGR syndrome.