



Organização: Pró-Reitoria de Pesquisa - USP



Capacitação em Escrita Científica

Módulo 3

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Módulo 1: O Gênero Literário

Seções de Um Artigo Científico

Módulo 2: Estrutura 1: *Abstract*

Módulo 3: Estrutura 2: *Introduction*

Módulo 4: Estrutura 3: *Results and Discussion, Conclusion*

Módulo 5: Estilo

Linguagem 1: Especificidade, Complexidade e Ambiguidade

Módulo 6: Linguagem 2: Redundâncias, Ação no Verbo, Fluidez de Texto, Ritmo de Escrita

Módulo 7: Linguagem 3: *Plain English*, Escrever em Inglês, Preposições

Módulo 8: Linguagem 4: *Topic Sentences, Cover Letters, Final Remarks*

Módulo 3

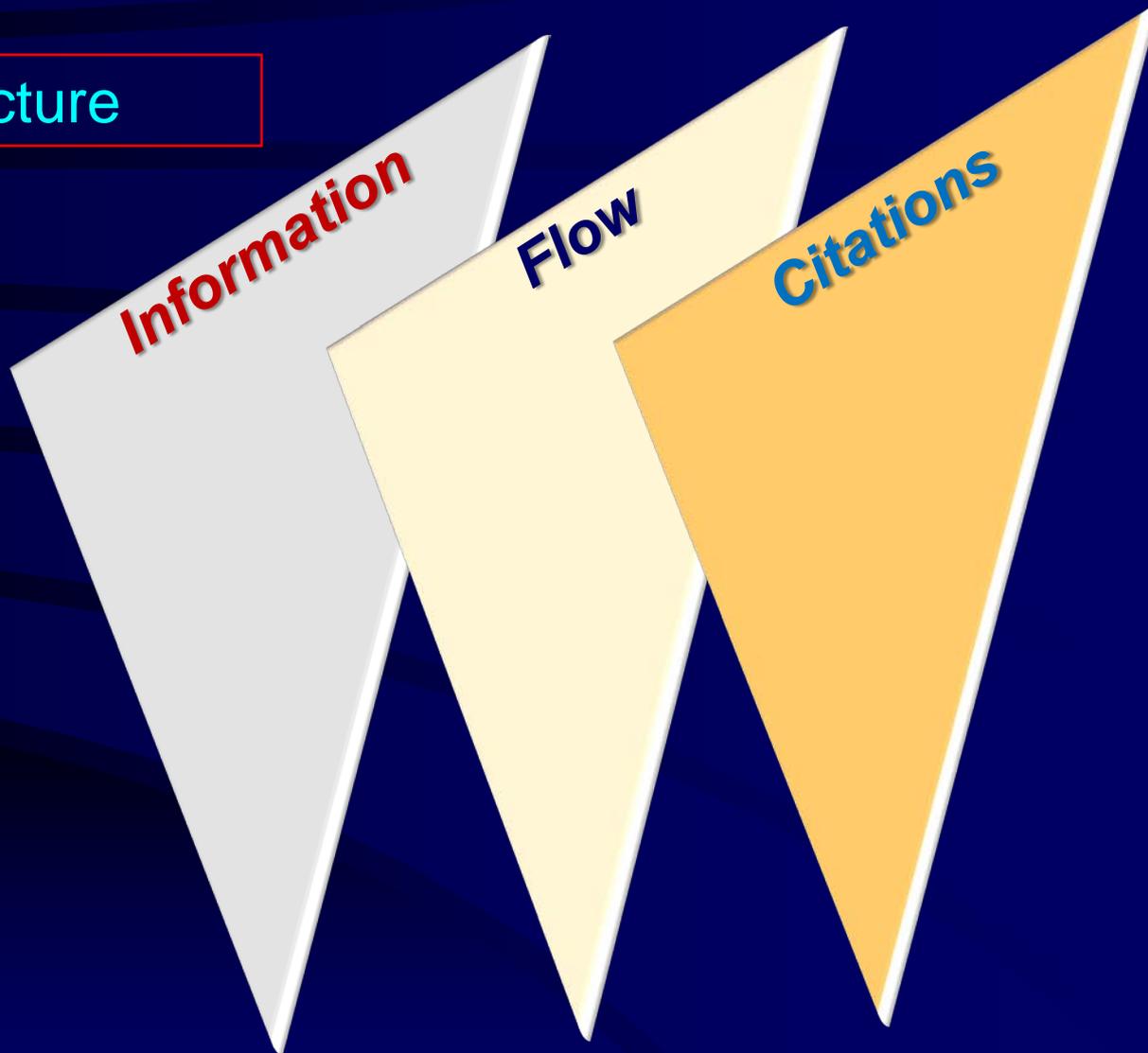
Estrutura 2: Introduction



Adapted from: Hill et al., Teaching ESL students to read and write experimental papers, TESOL Quarterly, 16: 333, 1982:

Introduction

3-D Architecture





Introduction



1. Information

Why is this Area Important?

What has been done
before?

Contextualization
State-of-the-Art

What has not been done ?

Literature Review

Gap

Why is this Study Important?

Hypothesis
Formulation

Purpose

What is presented here?



1. Contextualization

Present the research field and show the importance of the main area,
Make terms and processes familiar.

“The adoption of project driven approaches across different sectors and industries and economies is steadily increasing and is likely to continue (Linde & Linderoth, 2006; Winter et al., 2006a; Nocker, 2006). The trend has led institutions such as the Project Management Institute (PMI) to promote certification and issue standards to guide Project Management (PM) practice (Hodgson, 2002; Winter et al., 2006a). Projects are perceived to be a popular vehicle for delivering organisations’ objectives.”

The Electronic Journal on Information Systems in Developing Countries, EJISDC (2013) 58, 7, 1-32.

1. Contextualization

Present the research field and show the importance of the main area,
Make terms and processes familiar.

“Customer satisfaction became part of every business process and crafting new business processes with the help of technology in order to acquire and retain the most profitable customers is gaining interest among traditional manufacturing organizations (Anderson et al., 1994). Customer relationship management (CRM) has become a new branch of learning in business management (Venkatesan and Kumar, 2004; Reinartz and Kumar, 2000, 2002, 2003).”

Journal of Business & Industrial Marketing., 28/6 (2013) 468–474



1. Contextualization

Present the research field and show the importance of the main area,
Make terms and processes familiar.

“Collaborative Planning, Forecasting, and Replenishment (CPFR), based upon supply chain collaboration standards established by the Voluntary Interindustry Commerce Solutions (VICS) Association, are information systems that enable partnering firms to integrate their inventory planning, forecasting and replenishment processes by sharing information, developing joint forecasts and jointly crafting replenishment plans.

Journal of Operations Management 31 (2013) 285–297

1. Contextualization

Present the research field and show the importance of the main area,
Make terms and processes familiar.

“ Since 1998, when VICS first adopted a set of standards for CPFR information systems, more than 300 companies have engaged in CPFR practices leading to substantial benefits to suppliers, such as Procter and Gamble and Kimberly- Clark and retail chains, such as Wal-Mart and Best Buy (VICS, 2007).”

Journal of Operations Management 31 (2013) 285–297

1. Contextualization

Present the research field and show the importance of the main area,
Make terms and processes familiar.

M3P8 Anal Chem

“Concentration determination of analytes such as biomarker molecules and drug substances and their related compounds in biological matrixes, termed as “bioanalysis”, is a critical part of drug discovery and development. Although ligand-binding assays are still the main platform for the bioanalysis of protein and peptide analytes, liquid chromatography □ mass spectrometry (LC □ MS) assays play increasingly more important roles as a complementary platform.

Juan et al., Analytical Chem, In Press

1. Contextualization

Present the research field and show the importance of the main area,
Make terms and processes familiar.

M3P10 Int J Inf

Web usage mining is a discipline within the field of web mining that concentrates on developing data mining techniques to model and study user web navigation behavior.^{1,2} In the context of web site personalization, web usage mining techniques have been utilized to take advantage of the data collected from users' interactions with a web site to study users' navigation behavior. Understanding user behavior **is invaluable in order to** deliver tailored content to the user,³ to support the creation of web agents aimed at guiding users within web site,⁴ or to improve the strategic requirements analysis for web sites.⁵

Borges et al., International Journal of Information Technology & Decision Making, 9, 2010, 547.

2. State the Gap

Open Questions, Restrictions and Limitations

“Although conceptually simple, CPFR implementations are complex in practice as they require exchange of large amounts of data for forecasting a wide range of products. They must account for varying promotional activities, involve multiple functional areas from multiple firms, take an extended period of time to implement, and integrate possibly incompatible business processes between CPFR partners (Doiron, 2004).

Journal of Operations Management 31 (2013) 285–297

2. State the Gap

Open Questions, Restrictions and Limitations

“Although the literature on CPFR has been growing, most previous CPFR studies have been design focused (e.g., Wang et al., 2010; Chen et al., 2009) or analytical (e.g., Fu et al., 2010; Aviv, 2002) and few studies provide empirical validation of the analytical results, thus limiting our understanding of the payoff from this emerging information system (IS).

Journal of Operations Management 31 (2013) 285–297

2. State the Gap

Open Questions, Restrictions and Limitations

M3P2 IEEE Sig Proc

“To make these applications viable with possibly vast numbers of sensors, **device costs will need to be low** (from a few dollars to a few cents depending on the application), sensors will need to last for years or even decades without battery replacement, and the network will need to organize without significant human moderation. **Traditional localization techniques are not well suited for these requirements.** Including a global positioning system (GPS) receiver on each device **is cost and energy prohibitive** for many applications, **not sufficiently robust** to jamming for military applications, and **limited to outdoor applications.** Local positioning systems (LPS) [6] rely on high-capability base stations being deployed in each coverage area, **an expensive burden for most low-configuration** wireless sensor networks.

Patwari N. et al, IEEE Signal Processing Magazine, 2005, p 54

2. State the Gap

Open Questions, Restrictions and Limitations

M3P9 JACS

“Molecular oxygen is an ideal oxidant, and significant progress has been made in the development of catalytic methods for aerobic alcohol oxidation.⁹ Nevertheless, key challenges must be addressed in order for such reactions to find widespread use in the synthesis of complex molecules. Large-scale applications of aerobic alcohol oxidation are constrained by safety concerns associated with the combination of O₂ and organic solvents and reagents,^{8a,b} as well as the frequent use of halogenated solvents.

Hoover et al., J. Am. Chem. Soc. 133, 16901, 2011

2. State the Gap

Open Questions, Restrictions and Limitations

M3P8 Anal Chem

“One common drawback of the full scan MS approach is the lower selectivity caused by higher background or interferences as compared to that seen in the SRM approach. Recently, there have been significant advances in the capabilities of high-resolution mass spectrometry (HR-MS) instrumentation [11,12]. HR-MS can provide additional advantages in resolving each isotopic ion from the background so that higher selectivity can be achieved.

Juan et al., Analytical Chem, In Press

2. State the Gap

Open Questions, Restrictions and Limitations

M3P11 SIAM J Comput

The complexity of terrain guarding **has been an open problem of interest since 1995**, when an NP-completeness proof was proposed but never completed by Chen, Estivill-Castro, and Urrutia [2]. They described vertex and clause gadgets and suggested that they could be put together along the lines of Lee and Lin's reduction for guarding polygons [13].

King et al., SIAM J. Comput. 40, 1316, 2011

3. State the purpose of the paper

In this paper, we explore this question empirically. We first describe a hypothetical self-dealing transaction between two firms controlled by the same person that can in principle be used to improperly enrich this person. We then ask attorneys from Lex Mundi law firms in 102 countries to describe in detail how each country's legal system regulates this transaction. (Lex Mundi is an association of international law firms with members in 108 countries.)

Journal of Financial Economics 88 (2008) 430–465

3. State the purpose of the paper

The discrepancy of low hierarchy presence in Facebook (and Google Plus) is partially caused by the nature of social networks (to simulate and go beyond social interaction[8]). This paper uses the popularly used social media site, Facebook, to study which aspects of the function of a system relate to the lack of hierarchy. Through a survey of Facebook users on their usage of various features of Facebook, and the comparison of these findings to predictions made on the usage of each of these features using Systems theory, conclusions are reached on how the absence of hierarchy in social media sites impacts the system.

International Journal of Business and Commerce 3, 2013, 117-135

3. State the purpose of the paper

The aim of this paper is to identify the availability and use of information at the competitive bidding stage. For this, an interview study with industrialists from different sectors was conducted. The related literature in contract bidding including the bidding process, contract conditions and typical payment methods is described in Section 2. Sections 3 and 4 describe the interview study and its results.

Journal of Manufacturing Technology Management 24, 2013 pp. 976-997

3. State the purpose of the paper

The focus of this paper lies in offering a complementary way of evaluating the design of new and complex economic mechanisms beyond the economic criteria (e.g., efficiency, revenue, etc.) that are traditionally used. Using combinatorial auctions as the context, we ask the research question: How can we evaluate the user acceptance potential of complex economic mechanisms? Our general approach follows the design science paradigm of Hevner et al. (2004). We describe novel bidder support artifacts, which include information feedback schemes for bidders to facilitate bid construction. Because our approach is used to design several different information feedback artifacts, it meets the design as an artifact criterion of design science research.

Journal of Operations Management 31 (2013) 489–503

3. State the purpose of the paper

M3P13 Human Comp Int

In this article, we explore the ways in which cognitive personalization technologies can support effective sensemaking with web-based educational resources. First, we describe several use cases to illustrate how learners in a variety of settings might interact with and benefit from cognitive personalization tools. We then discuss a theoretical model of educative sensemaking. **Next, we describe** a prototype cognitive personalization service, the Customized Learning Service for Concept Knowledge: CLICK. Its personalization capabilities are realized through a combination of natural language processing algorithms and graph analytic techniques. We use the term “service” as CLICK has been designed and implemented as a web service application programming interface, enabling cognitive personalization capabilities to be flexibly embedded in a rich variety of tools, portals, and learning environments. **We then describe** a learning environment implemented with CLICK and discuss empirical findings from a controlled, mixed-method study that explored its impact on learners’ sensemaking processes. **Finally, we discuss** implications of our work and future challenges for promoting personalized sensemaking with digital educational resources.

Butcher et al., Human–Computer Interaction, 26, 2011,123.

3. State the purpose of the paper

M3P5 Lang

“In this paper, detailed characteristics of the hydrated (LPEI/PAA)OEGDA composite are investigated and the reason for its relatively high ionic conductivity is discussed. Morphological effects due to the presence of OEGDA oligomer on the phase transition will also be described.”

Lowman et al., *Langmuir* **2004**, *20*, 9791-9795

M3P6 Lang

“**In the work reported here**, a polyelectrolyte multilayer platform capped by a polyanionic surface was created through layer-by-layer assembly [21] and stamped with a polycationic pattern using POPS, to form docking sites for the negatively charged magnetic beads.”

Lyles et al., *Langmuir* **2004**, *20*, 3028-3031

3. State the purpose of the paper

M3P9 JACS

Here, we report a new, highly active (bpy)CuI/TEMPO catalyst system that effects selective aerobic oxidation of a broad range of primary alcohols, including allylic, benzylic, and aliphatic derivatives, to the corresponding aldehydes. The reactions proceed in high yield, exhibit broad functional-group compatibility, and achieve chemoselective formation of aldehydes with negligible overoxidation to the carboxylic acids. Furthermore, the reactions exhibit exquisite selectivity for 1° over 2° alcohols, enabling selective oxidation of diols, without requiring the use of protecting groups. The use of a traditional organic solvent (acetonitrile), and the ability to carry out most of the reactions at room temperature with ambient air as the oxidant greatly enhances the practicality of these methods. Overall, the utility of these methods rivals or surpasses that of traditional laboratory-scale alcohol oxidation reactions. The development, scope, and limitations of these methods are elaborated below.

Hoover et al., J. Am. Chem. Soc. 133, 16901, 2011



Introduction



2. Flow

Structure

Information in the text flows from General to Specific, arriving at purpose.

General

Contextualization

Your Field

Sumarizing Previous
Research

Purpose

Specific

Your work

“Afunilando” o fluxo de idéias....

M3P7 Nano Lett

While a vast majority of LBL systems undergo linear growth (l-LBL), there are also some quite special combinations of polyelectrolytes which exhibit so-called “exponential growth” (e-LBL). **Recently, a different modification** of the technique which does not require rinsing and is based on dewetting phenomena, so-called dewetting LBL or d-LBL, **was also introduced** by our group.⁴⁴ The l-LBL method has been studied and applied most extensively and thus covers most of LBL publications. **A substantially smaller and more recent subset of LBL literature is related** to e-LBL films. Historically, e-LBL was observed for the first time in 1999 by Elbert et al.⁴⁵ for poly(L-lysine) (PLL) and alginate (AG) polyelectrolytes pair. The authors observed.....

Podsiadlo et al., Nano Letters, 2008 , 8, 1762

Swales Model: *Create a Research Space*

Move 1: Establishing a Territory

- Step 1: Claiming Centrality **and/or**
- Step 2: Making topic generalizations **and/or**
- Step 3: Reviewing items of previous research

Move 2: Establishing a Niche

- 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

- Step 1A: Outlining Purpose **or**
- Step 1B: Announcing present research
- Step 2: Announcing main findings
- Step 3: Indicating RA structure

John M. Swales, *Genre Analysis: English in Academics and Research Settings*, Cambridge University Press, 1990.

3. Citations

The citation process:

Authors cite to prove where the ideas came from

Authors **DO NOT cite to show where the text came from!!!**

Selecting references to cite

Seminal Papers

Contextualization / Gap

Most Recent Papers

State of the Art / Gap

Most Important Papers

Relevance / Motivation / Importance

Style

- Contextualization and Gap: Past, present-perfect (continuous) generally used.
- Purpose: Present or past tense are preferable.
- Use the active voice as much as possible.
- Third Person with some use of first person.

John M. Swales, Genre Analysis: English in Academics and Research Settings, Cambridge University Press, 1990.

Patwari N. et al, IEEE Signal Processing Magazine, 2005, p 54

Rubner et al., *Langmuir* **2004**, *20*, 1362.

Lowman et al., *Langmuir* 2004, 20, 9791-9795

Borges et al., International Journal of Information Technology & Decision Making, 9, 2010, 547.

Urselmann, et al., IEEE Transactions on Evolutionary Computation, 15, 2011, 659

Olek et al., *Nano Lett.*, Vol. 4, 1889, (2004)

Yoon et al., International Journal of Plasticity 27 (2011) 1165

Podsiadlo et al., Nano Letters, 2008 , 8, 1762

Butcher et al., Human–Computer Interaction, 26, 2011,123.

King et al., SIAM J. Comput. 40, 1316, 2011

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