Scientific Publications

Manuela Aparicio, PhD

Carlos J. Costa, PhD

(2020)

Agenda

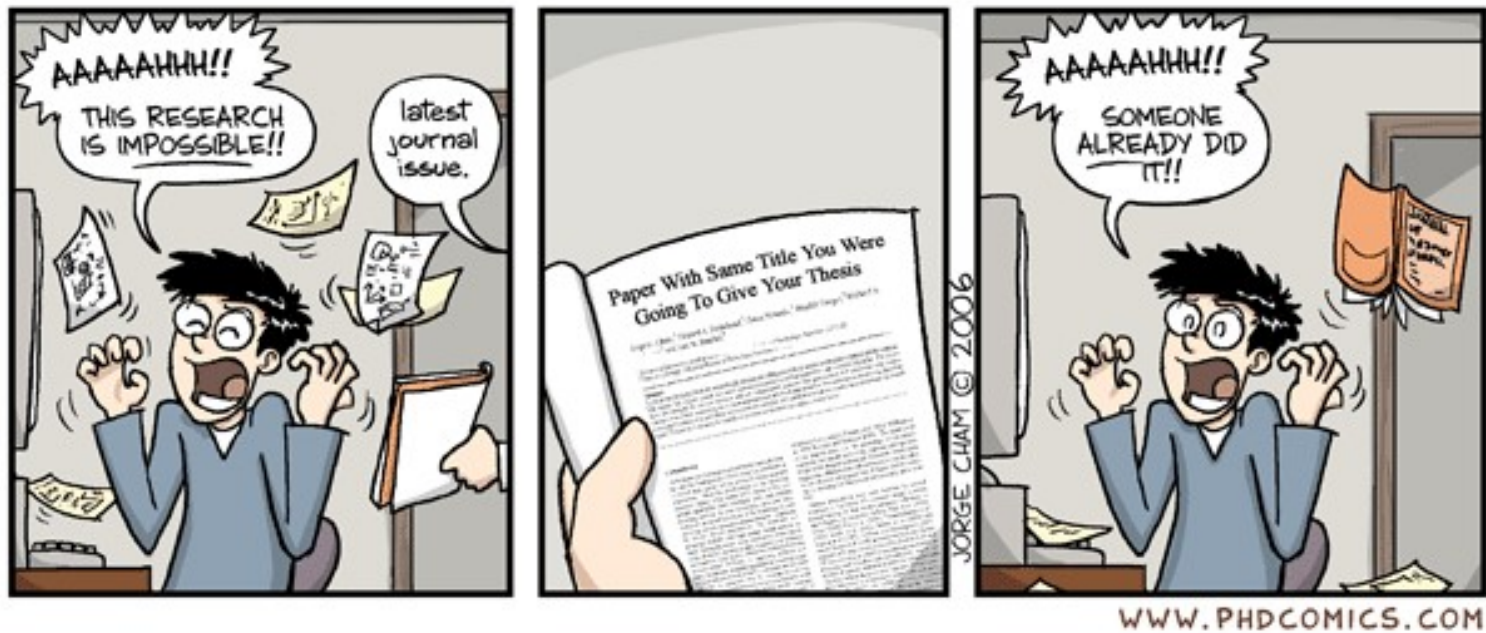- Publishing
- Review Process
- Paper/Article Structure
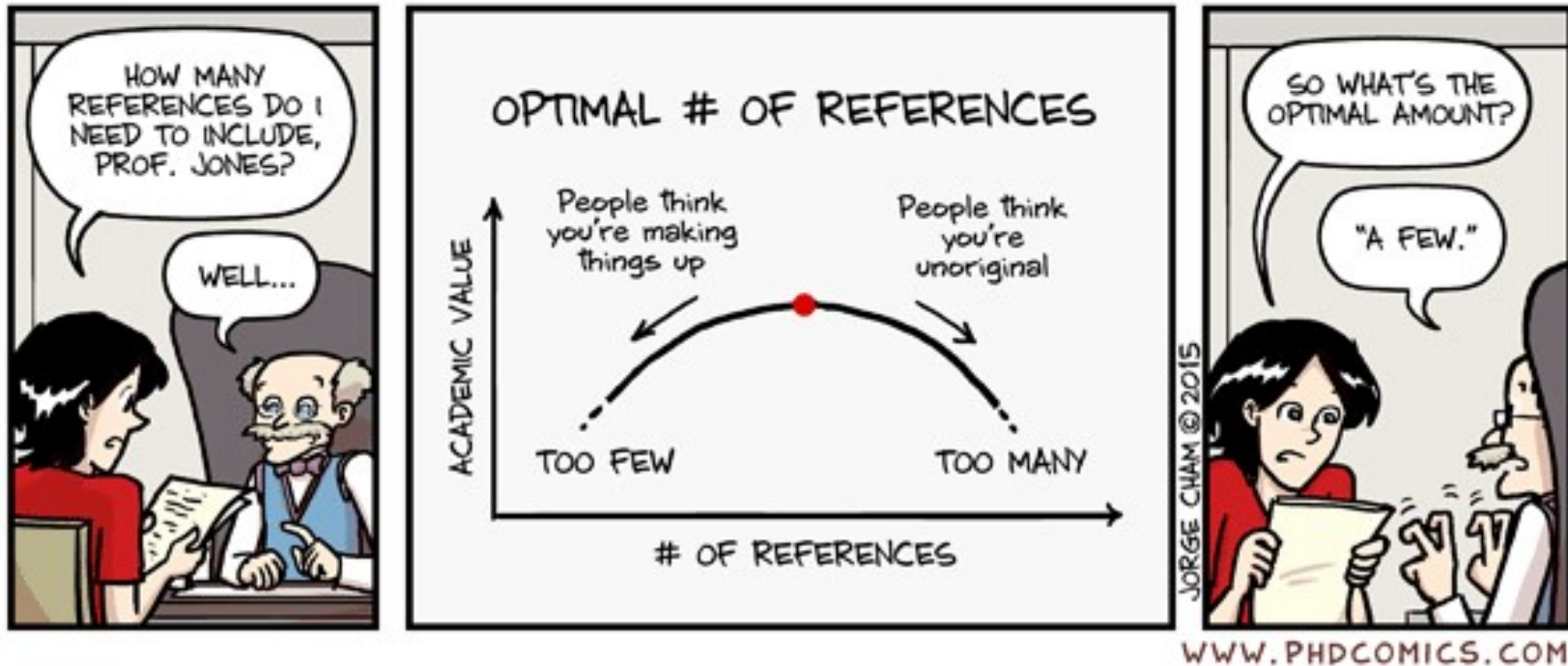- Writing Guidelines

Scientists must write

Scientists must publish

Scientists must be cited

Scientists must be read

Heinrich Oldenburg

• Heinrich Oldenburg (or Henry Oldenburg) (c. 1619 - 1677)

 – German born

 – Theologian, diplomat, natural philosopher;

 – Early member of the Royal Society (founded in 1660),

 – Served as first secretary of the Royal Society

 – Known for creating the first scientific journal – Philosophical Transactions of the Royal Society of London - 1665
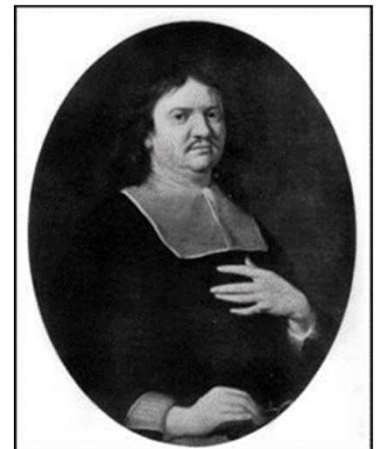
Heinrich Oldenburg
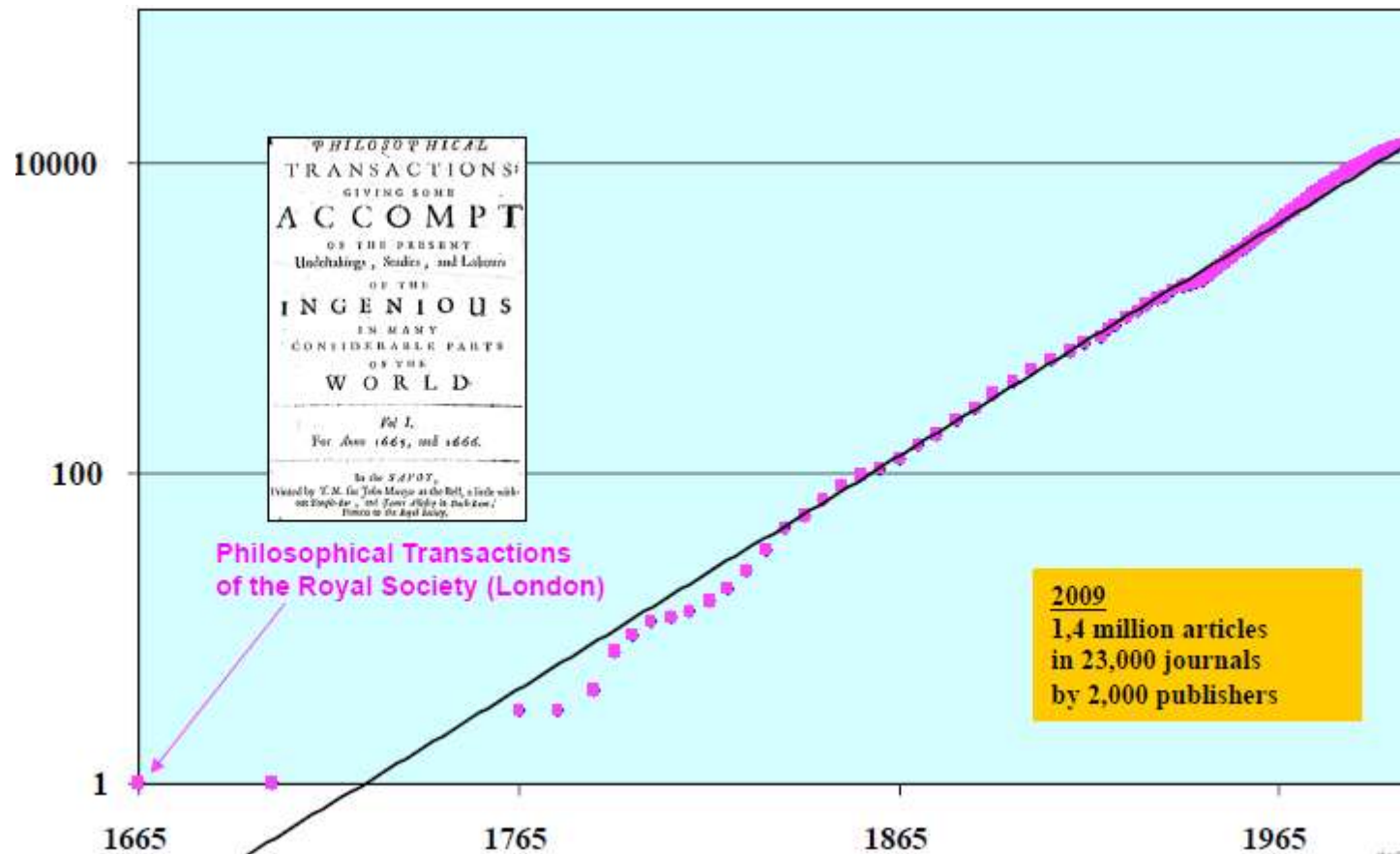
M A Mabe The number and growth of journals *Serials* 16(2).191-7, 2003

Trends in Publishing

- **Rapid conversion from "print" to "electronic"**
  - 1997: print only
  - 2009: 55% e-only (mostly e-collections)
  - 25% print only
  - 20% print-plus-electronic
  - 2013: 95+% electronic access
- **Changing role of "journals" due to e-access**
- **Increased usage of articles**
  - at lower cost per article
  - **Electronic submission**
  - Increased manuscript inflow
- **New publishing models**
  - E.g. "author pays" models (open access), "delayed open access" (open archiving), etc.

Why Publishing?

•Publishing is one of the necessary steps embedded in the scientific research process. It is also necessary for graduation and career progression

Think about **WHY you want to publish your work.**

- Is it **new and interesting**?
- Is it a current **hot topic**?
- Have you **provided solutions** to some difficult problems?
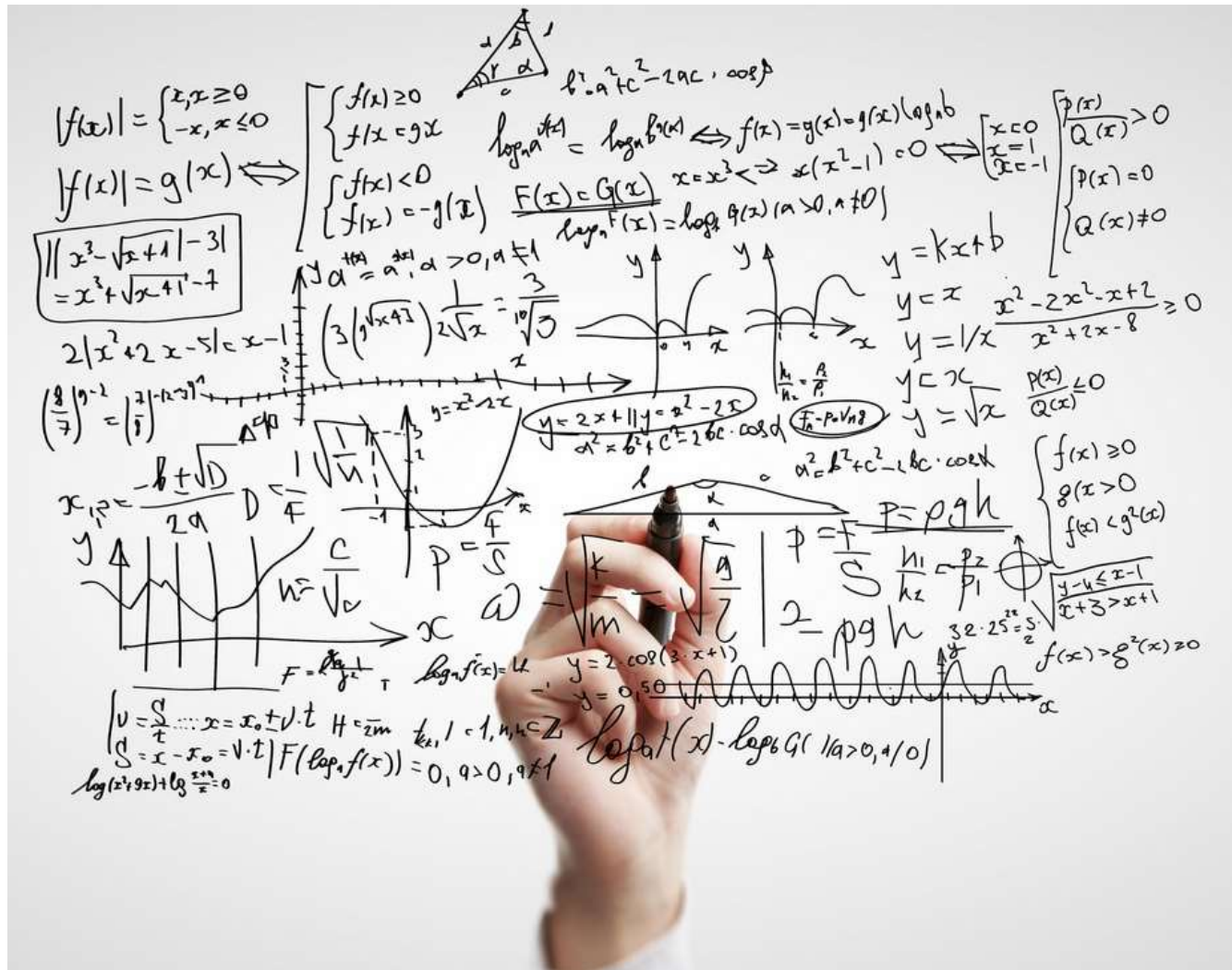- Are you **ready** to publish at this point?

Why Publish?

- Improves the changes of getting a research grant

- May help you to secure employment

- Personal sense of achievement

- Get research into the public domain

- Contribute towards the evaluation of universities
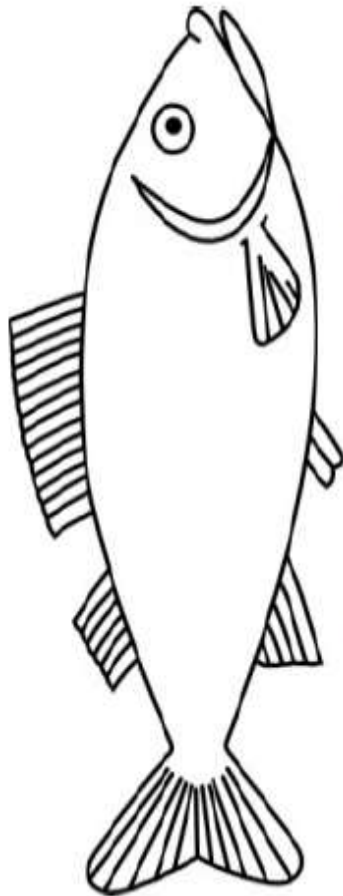
Why Publishing?
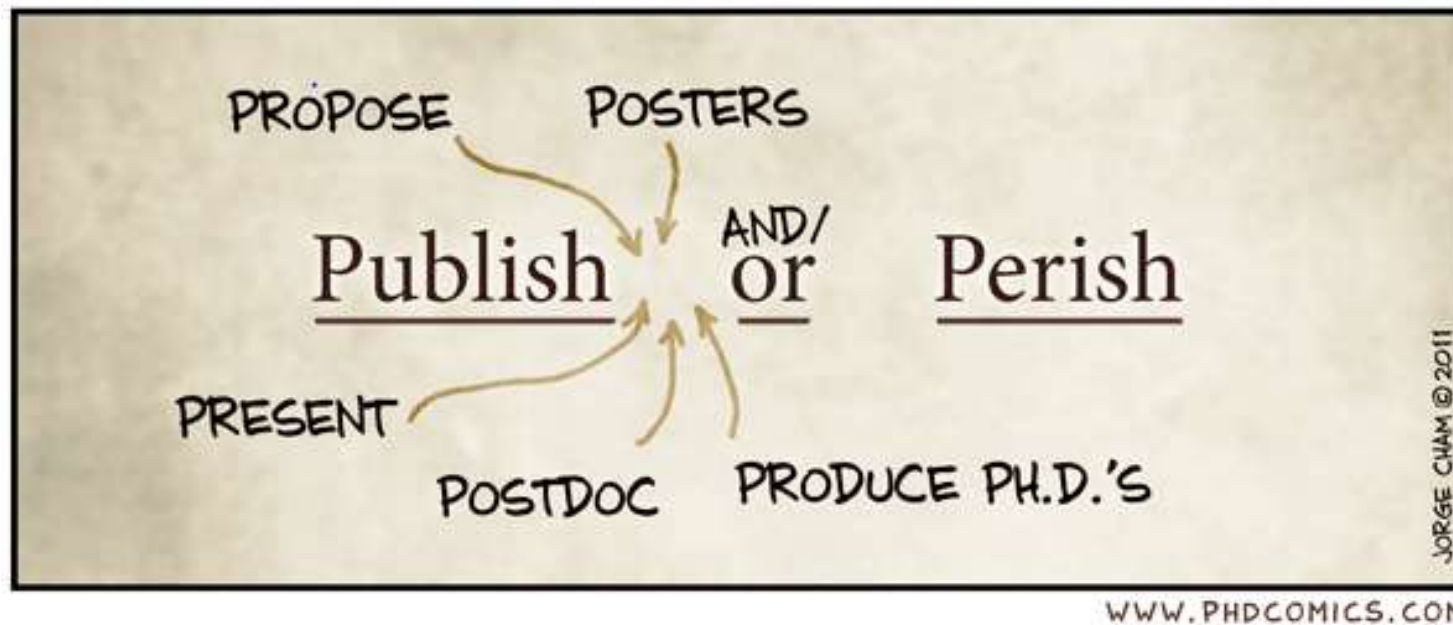
Writing is not an exact science, there are no formulas!

But some tips and guidelines

General Structure

- Title
- Abstract
- Keywords

- Main text (IMRAD)
  - Introduction
  - Methods
  - Results
  - And
  - Discussions

- Conclusion
- Acknowledgement
- References
- Supplementary Data

• Make them **easy for indexing** and **searching**! (informative, attractive, effective)

• Journal **space** is not unlimited.

• Your reader's **time** is scarce.

• Make your article as **concise** as possible - more difficult than you imagine
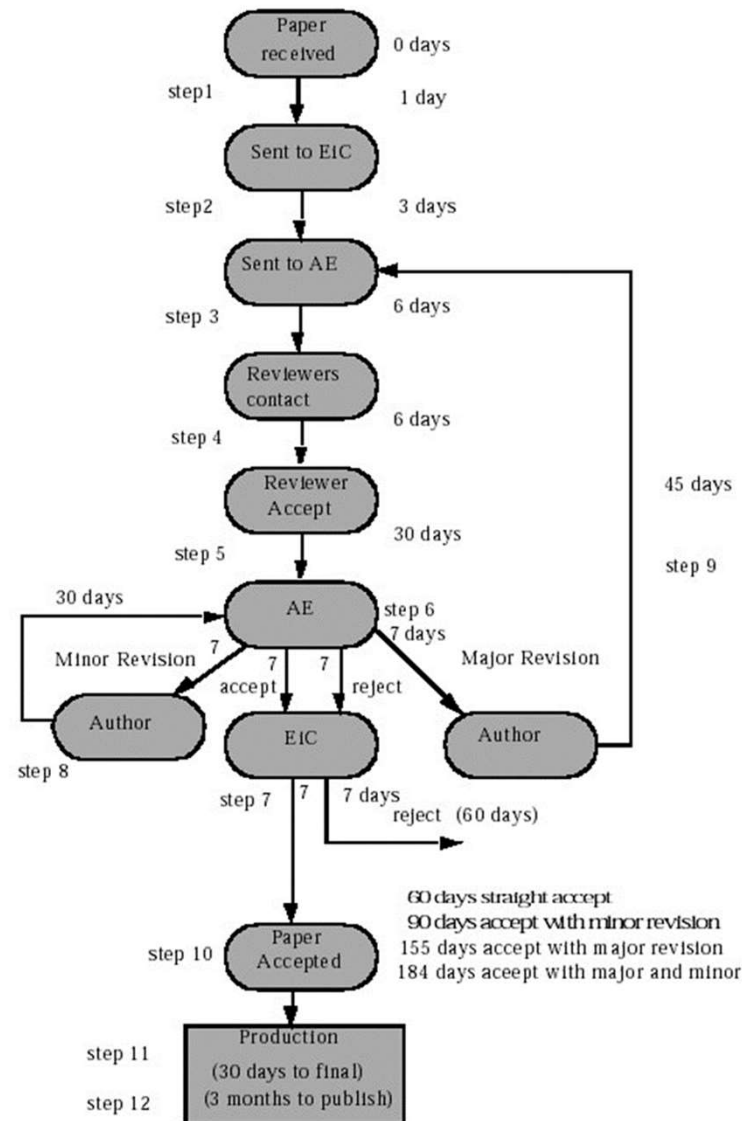
Review Process [Traditional]

• One or more reviews by subject matter experts

• Reviewers selected by editor

• Reviewer identity not disclosed to author ("blind" review)

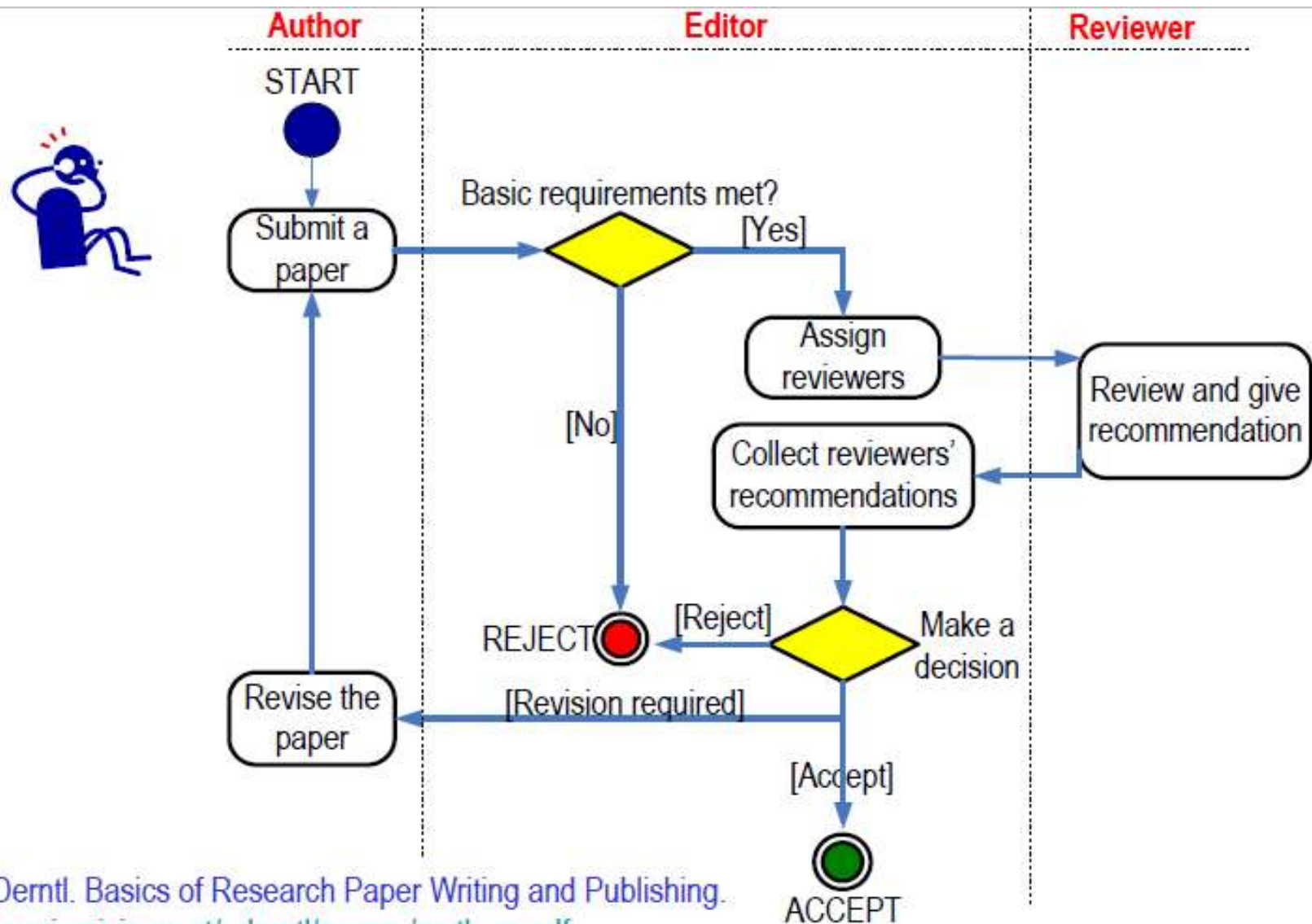• Author identity may (or may not) be disclosed to reviewer

• Editor has final decision
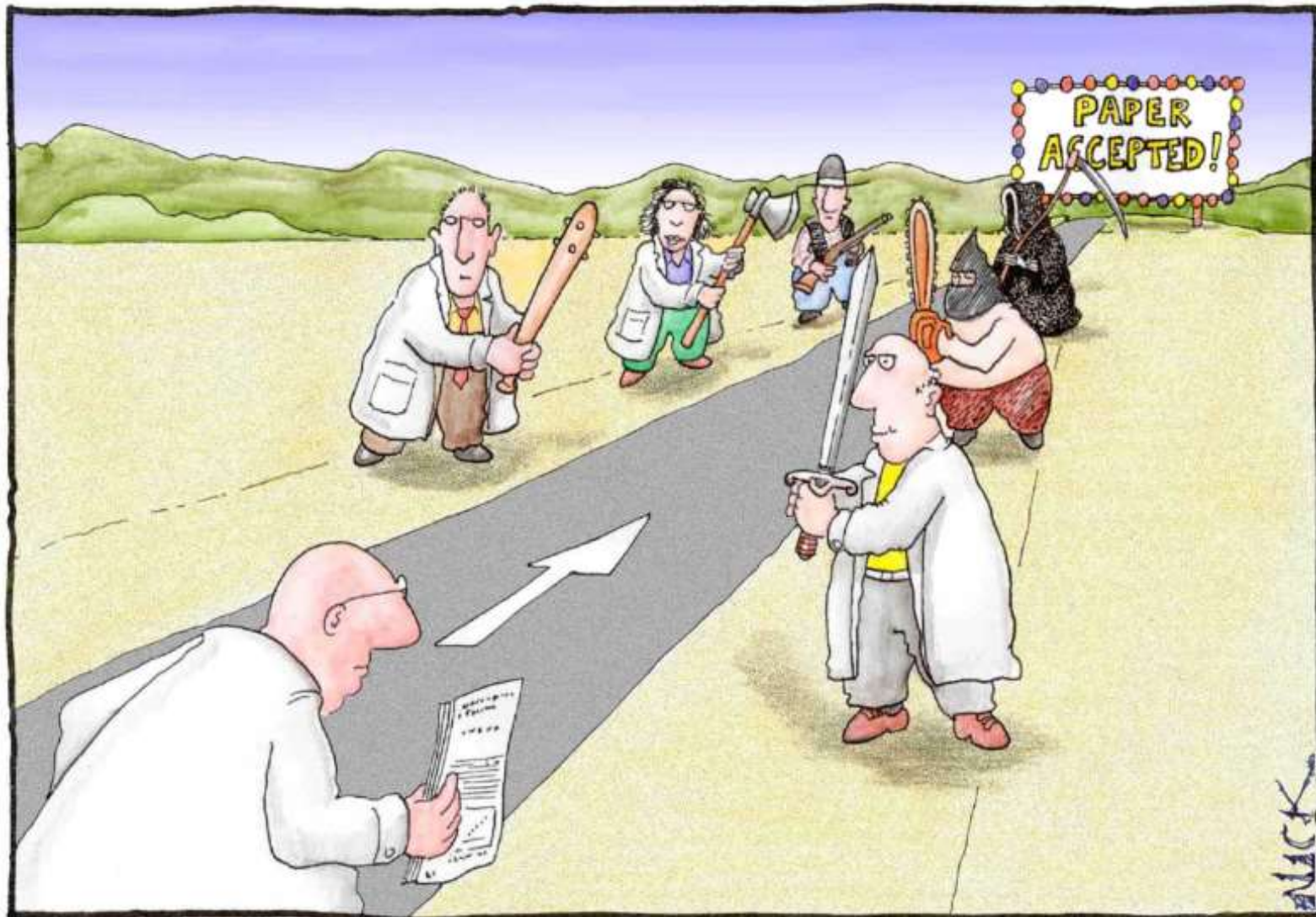
Most scientists regarded the new streamlined peer-review process
as "quite an improvement."

Peer Review Process

Source: http://virtual.vtt.fi/virtual/proj2/titb/authors/review.html

Peer Review Process

Author	Editor	Reviewer

START

Submit a paper

Basic requirements met?

[Yes]

[No]

Assign reviewers

Review and give recommendation

Collect reviewers' recommendations

[Reject]

REJECT

Make a decision

Revise the paper

[Revision required]

[Accept]

ACCEPT

Michael Derntl. Basics of Research Paper Writing and Publishing.
http://www.pri.univie.ac.at/~derntl/papers/meth-se.pdf

Reasons for manuscript **rejection** ☹

1. Inappropriate or incomplete statistics

2. Overinterpretation of results

3. Inappropriate or suboptimal instrumentation

4. Sample too small or biased

5. Text difficult to follow

6. Insufficient problem statement

7. Inaccurate or inconsistent data reported

8. Incomplete, inaccurate, or outdated review of the literature

9. Insufficient data presented

10. Defective tables or figures

Reasons for **accepting** ☺ a manuscript

- Important, timely, relevant, critical, prevalent problem
- Well-written manuscript (clear, straightforward, easy to follow, logical)
- Well-designed study (appropriate, rigorous, comprehensive design)
- Thoughtful, focused, up-to-date review of the literature
- Sample size sufficiently large
- Practical, useful implications
- Interpretation took into account the limitations of the study
- Problem well stated, formulated
- Novel, unique approach to data analysis

General Structure
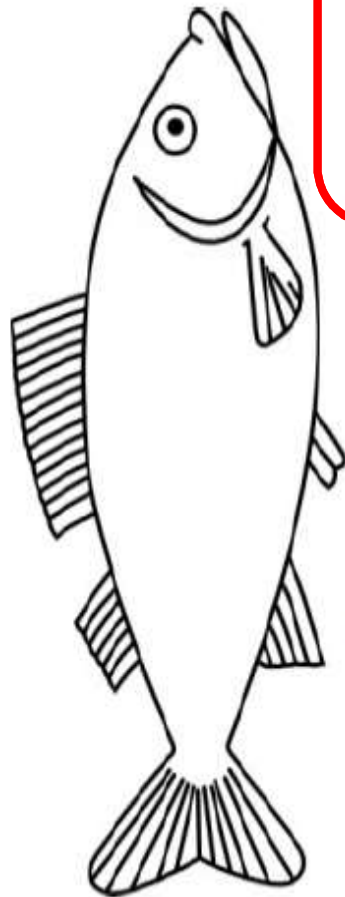
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- **Acknowledgement**
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- **Supplementary Data**

• Title: should be short and appealing

• Authors: All those who participated in the paper/work

• Affiliation: University and Research Centres of all authors

• Abstract: Writen in the end, it sumarizes the general ideas of the paper (objective, methodology & some results)

Title

Describes, in as few words as possible, what the paper is about.

Full length article

Enterprise resource planning adoption and satisfaction determinants

Carlos J. Costa [a], Edgar Ferreira [a], Fernando Bento [a], Manuela Aparicio [a, b, c, *]

[a] Instituto Universitario de Lisboa (ISCTE-IUL) ISTAR-IUL, Portugal
[b] NOVA IMS, Universidade Nova de Lisboa, Portugal
[c] Unidcom/IADE, Portugal

ABSTRACT

Enterprise Resource Planning (ERP) systems are at the core of every firm. Making people use this costly and time-consuming investment is one of the most important issues to deal with. The main objective of the present study is to find the key determinants that open the door to user satisfaction and adoption. A theoretical model was set and an online survey was conducted to understand ERP users' perspective on such matters. The outcome was the model validation and the understanding that top management support, training, and the system quality are important constructs to assess adoption and user satis-faction. In fact, the latter (system quality) has a significant influence on the behavioural intention to use and also in the overall user satisfaction. As management support is a very relevant determinant to ERP usage. Accordingly, this study enlightens theory, by contributing to a new model of ERP adoption and satisfaction. It also provides relevant evidence to companies involved in the ERP implementation process.

Abstract

Summarizes the whole paper, including the results

Full length article

Enterprise resource planning adoption and satisfaction determinants

CrossMark

Carlos J. Costa [a], Edgar Ferreira [a], Fernando Bento [a], Manuela Aparicio [a, b, c, *]

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Enterprise Resource Planning (ERP) systems are at the core of every firm. Making people use this costly and time-consuming investment is one of the most important issues to deal with. The main objective of the present study is to find the key determinants that open the door to user satisfaction and adoption. A theoretical model was set and an online survey was conducted to understand ERP users' perspective on such matters. The outcome was the model validation and the understanding that top management support, training, and the system quality are important constructs to assess adoption and user satisfaction. In fact, the latter (system quality) has a significant influence on the behavioural intention to use and also in the overall user satisfaction. As management support is a very relevant determinant to ERP usage. Accordingly, this study enlightens theory, by contributing to a new model of ERP adoption and satisfaction. It also provides relevant evidence to companies involved in the ERP implementation process.

Keywords

Terms to the indexing process.

Keywords help in searching process too.

Full length article

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•Introduction gives a brief context of the topic, introduces the research gap (motivation), research objectives, and presents the paper structure

Introduction

Provides background for the research, identifies knowledge gaps, states the aims of the paper.

What did you do and why.

Literature Review

Provides background many scientists call it the "state of the art".

Gives an overview of what other scientists have done in the topic.

Literature Review

- In this part should be referred/cited the main authors on the topic

- Should entail various perspectives how the topic was studied

- Here only scientific references are accepted, from scientific papers, articles, or other scientific publications

Instruments in Literature Review

- Each paper you read should keep a register in order to reuse the information

- Do a fast read of the paper first & register in a table:

Year	Authors	Publication	Topic	Concepts	Methods	Results	Conclusions
Paper 1	….	….	…	…	…	…	…
…	…	…	…	…	…	…	…

- Add new, for example to instruments used and techniques

Instruments in Literature Review

For Literature Review.

Year	Authors	Publication	Topic	Concepts	Methods	Results	Conclusions
Paper 1	….	….	…	…	…	…	…
…	…	…	…	…	…	…	…

Instruments in Literature Review & Empirical Work

For designing data collection instruments
For Results Discussion

For designing data collection instruments
For Results Discussion

Year	Authors	Publication	Topic	Concepts	Methods	Results	Conclusions
Paper 1	....	....	...	...	...	...	...
...	...	...	...	...	...	...	...

Search Techniques

- Use search terms of the "same family"

    • (eg: computer science, computer technologies...)

- Use operators AND, OR, XOR (for two diferent terms, or one or another but not both at the same time)

- Use Truncations (eg: comput*)

- Combine synonyms: or, and (+), not (-)

    •(eg: computer and information or IT)

- To search na exact word "_____"

    •(eg: " computer science")

- For searching in specific domains; site:edu site:pt

- For searhing in titles (eg: allintitle: information systems)

- For searching in specific type of files; (eg: filetype: pdf)

- Use operators "?" or "$" for compound words

    •(eg. ecommerce ou e-commerce, mobile banking, m-banking)

Digital Libraries of Reference

- **National**
- https://www.iscte-iul.pt/contents/estudantes/520/biblioteca-iscteiul
- http://www.b-on.pt/
- http://www.rcaap.pt/

- **International**
- http://dl.acm.org
- http://ieeexplore.ieee.org/Xplore/home.jsp
- http://aisel.aisnet.org/
- http://dblp.uni-trier.de/
- https://scholar.google.com
-

Methodological Approach

Describes all study steps.

•Includes:

–Samples

–Sampling methods

–Data collection (methods/instruments)

–Data analysis (methods)

–Ethical statements

–(Some references)

vention "educates" users about ERP's usefulness.

Thus, we hypothesize that management support (MANS) influences positively the ERP usefulness.

H11. Management Support has a positive effect on Perceived ERP Usefulness.

According to Urbach et al. (2010), having management support is essential to motivate system's use.

With similar conclusions, several recent studies point out that this management encouragement can largely influence the use frequency of ERP systems (Bradley, 2008; J.; Nwankpa & Roumani, 2014; Pan & Jang, 2008).

Hence, we expect that the management support (MANS) may increase effective ERP use (USE).

H12. Management Support has a positive effect on ERP Use.

4. Empirical methodology

4.1. Measurement instrument

The research model was validated through the quantitative method using previously proven and tested scales to operationalize each construct and increase validity. Hence, in the development of the measurement instrument items were adapted from the previously confirmed empirical studies.

Considering the reviewed literature, a set of items was selected for each construct. After a thorough discussion, the most appropriate a group of items from previously validated empirical studies was chosen to have into consideration the validity and model's best fit.

Afterward, a first draft was created and pre-tested with a panel of ten randomly chosen ERP end users from different organizations. The first part included an introduction and a set of sample characterization questions. On the second part, the chosen model's

Results

Statistical results or Software test results are presented here.

Take special attention to the visual part of your tables and figures.

Discussion

Fig. 3. Structural model results.

predictive impact, as seen in Table 6. The five dependent latent variables are explained in more than half of the variances except PU and USE. User satisfaction (USS) with $R^2 = 0.702$, behavioural intention (BI) with $R^2 = 0.631$, and Perceived Ease of Use (PEOU) with $R^2 = 0.601$, present values that can be considered substantial. Q^2 is a measure of the predictive success, and positive values confirm the model's predictive relevance (Geisser & Eddy, 1979; Stone, 1974). Results show positive values for Use ($Q^2 = 0.256$), Perceived Usefulness ($Q^2 = 0.393$), Perceived Ease of Use ($Q^2 = 0.525$), Behavioural Intention ($Q^2 = 0.576$) and User Satisfaction ($Q^2 = 0.649$).

6. Discussion

6.1. Hypotheses discussion

All presented hypotheses were empirically supported for ERP systems. Though the given model shows predictive capacities supporting all hypotheses, results show different levels of support. These singularities will be addressed below.

Results show that the model's inner triangle, *i.e.* hypotheses 1, 2, and 3, show different effects. All effects are significant and positive but have different strengths. In the first hypothesis, perceived usefulness has a very significant influence on behavioural intention ($p < 0.001$) and also has medium effect explaining this relation ($0.350 > f^2 > 0.150$). The relation between perceived ease of use and

Study comparisons with other studies.

Data interpretation

• Study's limitations

• How data fits/contradicts published work

Discussion

• Several references

Table 6
Results of hypotheses tests.

Hypotheses	Independent variable	→ Dependent variable	Findings	Conclusion
H1	Perceived Usefulness (PU)	→ Behavioural Intention (BI)	Positively & statistically significant *** ($\hat{\beta} = 0.426, p < 0.001$)	Supported with medium effect
H2	Perceived Ease Of Use (PEOU)	→ Perceived Usefulness (PU)	Positively & statistically significant *** ($\hat{\beta} = 0.377, p < 0.001$)	Supported with small effect
H3	Perceived Ease Of Use (PEOU)	→ Behavioural Intention (BI)	Positively & statistically significant * ($\hat{\beta} = 0.188, p < 0.050$)	Supported with small effect

General Structure
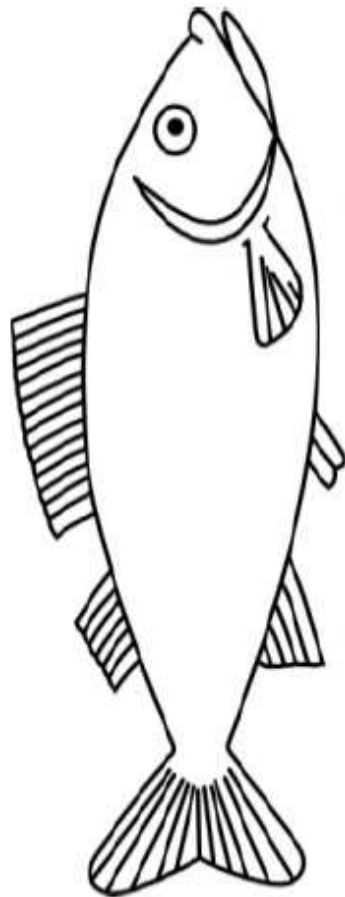
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- At the end only global conclusions
- Funding/ Grants
- REFs
- Appendixes A, B, C, D….

Conclusions

Study conclusions and future works.

In this section do not refer to other studies/authors.

Future works are to be placed here too.

studies that studied the same kind of relations (J. Nwankpa & Roumani, 2014; Rajan & Baral, 2015; Youngberg et al., 2009).

Hypothesis 11 shows management support impact on perceived usefulness. This relation is positive, highly significant ($p < 0.001$), and shows a small effect ($0.150 > f^2 > 0.020$) explaining perceived usefulness. Results are consistent with Bradley's (2008) qualitative study on how management support was required but wasn't the most important fact explaining project's success. Also Nwankpa and Roumani (2014) sustain that management support is important educating users about ERP system usefulness.

Considering reviewed literature, results on training effect on perceived usefulness and on perceived ease of use are somewhat disappointing. Model results show that training has a medium significance ($p < 0.010$) and a small effect ($0.150 > f^2 > 0.020$) towards perceived usefulness (hypothesis 6), and a high statistical significance ($p < 0.001$) but also small effect ($0.150 > f^2 > 0.020$) explaining perceived ease of use (hypothesis 7). Literature stresses the critical importance of this specific construct's contribution to IS adoption in general and in ERP systems in particular (Bradley, 2008; Rajan & Baral, 2015; Ruivo et al., 2014; Youngberg et al., 2009). Although is also positively and significantly related to the model, training is the weakest independent latent variable.

System quality is without a doubt the most influencing independent LV of the model. This construct impact on perceived ease of use is vast ($p < 0.001$) and has a large explanatory effect ($f^2 > 0.350$). This result is consistent with the previous ERP adoption study by Sternad and Bobek (2013). Hypothesis 9 shows a weaker link of system quality with behavioural intention, presenting a small explanatory effect ($0.150 > f^2 > 0.020$) and high statistical significance ($p < 0.001$). However, the system quality may be related to the extent of ERP implementation, as long as it can create the initial conditions for application integration and business process enhancements (J. K. Nwankpa, 2015). The ERP modularity characteristics can provide the possibility of a different scope and depth level of implementation. This relationship needs further studies.

In this study management support and system quality are key drivers to use and to user satisfaction, correspondingly. These dimensions can be related to change management and with ERP selection (Ranjan, Jha, & Pal, 2016), this is a relevant aspect needing to be studied.

Finally, the difference between hypotheses related with user satisfaction (H5 and H10) are quite revealing of system's quality weight in explaining user's perceptions about an ERP system. We have hypothesis 5 with a weak linkage between use and user satisfaction regarding statistical significance ($p < 0.050$), and in explanatory capabilities (small effect: $0.150 > f^2 > 0.020$). In opposition to this result, system quality showed a very high statistical significance ($p < 0.001$) as well as a large effect ($f^2 > 0.350$) when explaining user satisfaction. Our results confirm what other ERP studies suggested: System quality (SYSQ) is a key component to take into consideration (Chien & Tsaur, 2007; Tsai et al., 2012).

to consider.

Thirdly, results suggest that user satisfaction can be largely explained by system quality. System quality should be observed as a decisive construct when assessing an IS system, specifically ERP systems.

6.3. Practical implications

The presented model offers a mean of organizations to assess and predict the adoption and user satisfaction of their ERP systems. As seen before, ERP systems' adoption and user satisfaction are multidimensional and interdependent, and while some relations are stronger than others, the analysis should never isolate or reject one particular construct.

Although management support and training showed a lesser significance, this does not mean the influence should be disregarded since the influence exists and is statistically supported.

However, results are quite clear: system quality has the best explanatory capabilities and can largely and directly explain user satisfaction. Hence, practical implications for industry should be taken into account when implementing and maintaining an ERP system.

A correct understanding of the organization real necessities and requirements is vital to ensure that the configuration and parameterization of the needed functionalities are process oriented and without any clutter. Another implication is the importance of ensuring that all system components (hardware and software) are well balanced and integrated to assure fast and reliable data access.

6.4. Limitations and future work

The present study has some limitations. First, the sample data was collected from several organizations representative of major industries but doesn't have a comprehensive and exhaustive industry-wide panorama. Also, the sample was obtained from just one European country and represents a nationwide perspective. Although the results are statistically relevant, further surveys with a larger territorial scope will increase the model's explanatory capabilities.

The proposed model suggest a deeper study of the influence strength of System Quality with the other constructs. The most intriguing finding relates to the explanatory capabilities of this construct (SYSQ) opposed to the classical adoption and success theories when studying user satisfaction.

7. Conclusions

Nowadays, ERPs are at the core of every modern and competitive business. This multidimensional IS manages all the information flow and is critical for every organization stakeholder. Therefore, it is vital to understand what motivates individuals to use best the given ERP system. Hence, the present study aims to find the main determinants influencing ERP user adoption and satisfaction.

Literature review points out to three most significant constructs influencing adoption and satisfaction (independent LV) which are

References

- Full list of work cited
- Format may vary
 - APA V6
  - IEEE
  - Harvard
  - (…)

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. http://dx.doi.org/10.1016/0749-5978(91)90020-T.

Akkermans, H. A., Bogerd, P., Yücesan, E., & van Wassenhove, L. N. (2003). The impact of ERP on supply chain management: exploratory findings from a European Delphi study. *European Journal of Operational Research*, 146(2), 284–301.

Al-Mashari, M., Al-Mudimigh, A., & Zairi, M. (2003). Enterprise resource planning: a taxonomy of critical factors. *European Journal of Operational Research*, 146(2), 352–364. http://dx.doi.org/10.1016/S0377-2217(02)00554-4.

Amoako-Gyampah, K., & Salam, A. F. (2004). An extension of the technology acceptance model in an ERP implementation environment. *Information & Management*, 41(6), 731–745. http://dx.doi.org/10.1016/j.im.2003.08.010.

Basoglu, N., Daim, T., & Kerimoglu, O. (2007). Organizational adoption of enterprise resource planning systems: a conceptual framework. *The Journal of High Technology Management Research*, 18(1), 73–97. http://dx.doi.org/10.1016/j.hitech.2007.03.005.

Bingi, P., Sharma, M. K., & Godla, J. K. (1999). Critical issues affecting an ERP implementation. *Information Systems Management*, 16(3), 7–14. http://dx.doi.org/10.1201/1078/43197.16.3.19990601/31310.2.

Bradley, J. (2008). Management based critical success factors in the implementation of Enterprise Resource Planning systems. *International Journal of Accounting Information Systems*, 9(3), 175–200. http://dx.doi.org/10.1016/j.accinf.2008.04.001.

Brynjolfsson, E. (1993). The productivity paradox of information technology. *Communications of the ACM*, 36(12), 66–77. http://dx.doi.org/10.1145/163298.163309.

Bueno, S., & Salmeron, J. L. (2008 Dec 31). TAM-based success modeling in ERP. *Interacting with Computers*, 20(6), 515–523.

Chen, S.-C., Li, S.-H., & Li, C.-Y. (2011). Recent related research in technology acceptance model: a literature review. *Australian Journal of Business and Management Research*, 1(9), 124.

Chien, S.-W., & Tsaur, S.-M. (2007). Investigating the success of ERP systems: case studies in three Taiwanese high-tech industries. *Computers in Industry*, 58(8–9), 783–793. http://dx.doi.org/10.1016/j.compind.2007.02.001.

Chin, W. W. (1998). *The partial least squares approach for structural equation modeling.* Lawrence Erlbaum Associates Publishers. Retrieved from https://vpn2.iscte.pt/+CSCO+0h756767633A2F2F63666C706172672E6E636E2E626574++/psycinfo/1998-07269-010.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale: N.J.: L. Erlbaum Associates.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. http://dx.doi.org/10.1037/0033-2909.112.1.155.

Davenport, T. H. (1998 Jul 8). Putting the enterprise into the enterprise system. *Harvard Business Review*, 76(4).

Davis. (1986). *A technology acceptance model for empirically testing new end-user information systems: Theory and results.*

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319. http://dx.doi.org/10.2307/249008.

Davis, F. D. (1993). User acceptance of information technology: system characteristics, user perceptions and behavioral impacts. *International Journal of Man-Machine Studies*, 38(3), 475–487. http://dx.doi.org/10.1006/imms.1993.1022.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic Motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22(14), 1111–1132. http://dx.doi.org/10.1111/j.1559-1816.1992.tb00945.x.

DeLone, W. H. (1988). Determinants of success for computer usage in small business. *MIS Quarterly*, 12(1), 51–61. http://dx.doi.org/10.2307/248803.

DeLone, W. H., & McLean, E. R. (1992). Information systems success: the quest for the dependent variable. *Information Systems Research*, 3(1), 60–95. http://dx.doi.org/10.1287/isre.3.1.60.

Delone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of Information systems success: a ten-year update. *Journal of Management Information Systems*, 19(4), 9–30. http://dx.doi.org/10.1080/07421222.2003.11045748.

Diamantopoulos, A., & Siguaw, J. A. (2006). Formative versus reflective indicators in organizational measure development: a comparison and empirical illustration. *British Journal of Management*, 17(4), 263–282. http://dx.doi.org/10.1111/j.1467-

References Should be:

- According to the template format (read autor guidelines)

- Complete

- Current

- Scientific

- Managed with a Reference Management System (eg: Zotero)

During writing

- Proofreading your article
- Language Tool (FOSS)
- https://www.languagetool.org/
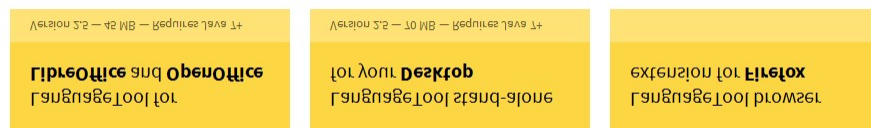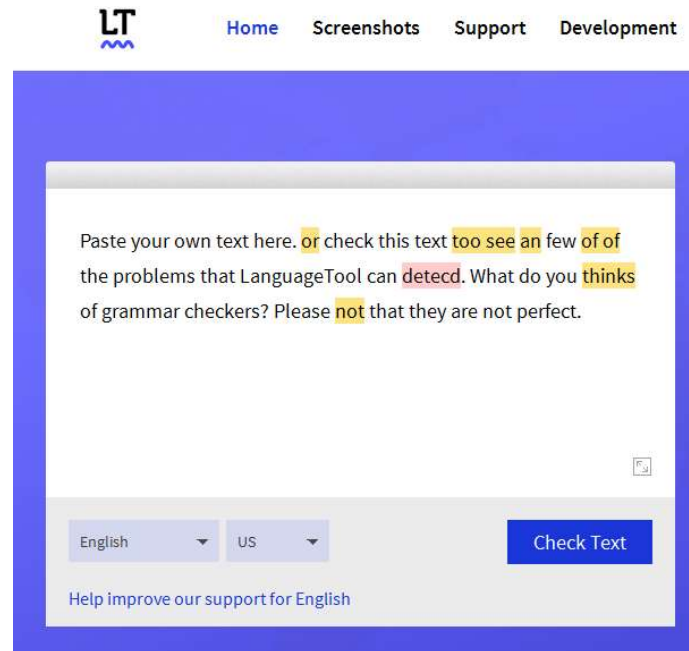
Publication Types

- Article (Scientific Journal, ISSN)
  - 10 to 25 pages (or 8000 words usually)

- Paper (Conference proceeding, ISBN)
  - Full paper (6 to 8 pages)
  - Short paper (4 to 6 pages)
  - Poster (up to pages or more it depends on the publication)

Writing an article: where to start?

The White Rabbit put on his spectacles.

"Where shall I begin, please your Majesty?"- he asked.

"Begin at the beginning," the King said gravely, "and go on till you come to the end: then stop."

Lewis Carol

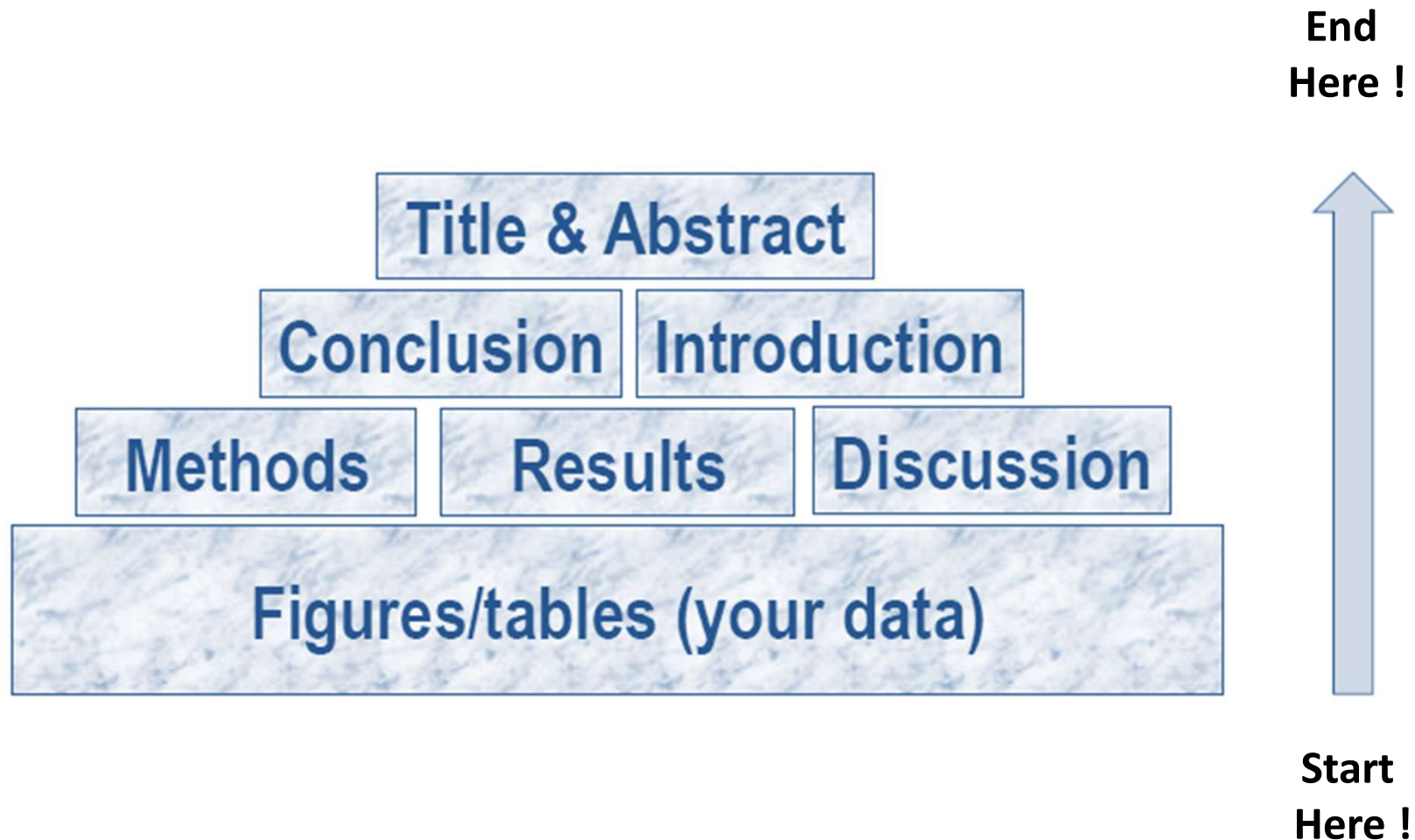Alice's Adventures in Wonderland

Writing a Paper

1. Think

2. Plan

Preparation before starting

3. Write

4. Revise

Writing process

Writing Process

Writing Mood…

How it is actually done ;)

Or Paper

Assignment:

- Presenting a Problem (Introduction)

- Literature Review

- Presenting Conceptual Solution

- Implementing/Illustrating a solution (*technologies*)

- Conclusions

Example of Technology

Blockchain

Business Intelligence (e.g. PowerBI)

Cloud Computing

Collaborative Systems

Content Management Systems

Crowdsourcing & Crowdfunding

Data mining - Weka

Data Science (e.g. Jupyter)

DBMS (e.g. SQLite)

Enterprise Resource Planning (ERP)

Mobile App (e.g. MIT App Inventor)

Python

Robotics

SNA – Social Network Analysis