Wissenschaftliches Publizieren

Prof. Dr. Javier Valdes

Organization:

- Deadline for midterm paper: 15th December
  - Pdf document
  - Draft of submission
  - Feedback will be provided

- Deadline for final submission: 31th January
  - Pdf documents (paper + letter)
  - Final submission
 - Final Mark will be provided

Paragraph

Imagine a circle that contains all of human knowledge:
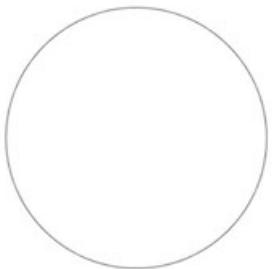
By the time you finish elementary school, you know a little:
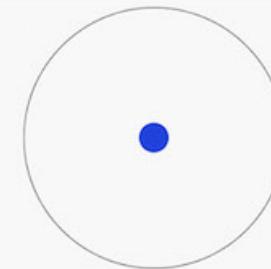
By the time you finish high school, you know a bit more:
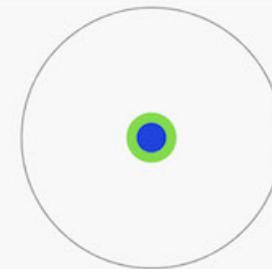
With a bachelor's degree, you gain a specialty:
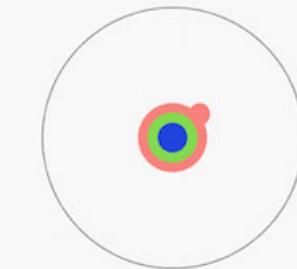
A master's degree deepens that specialty:
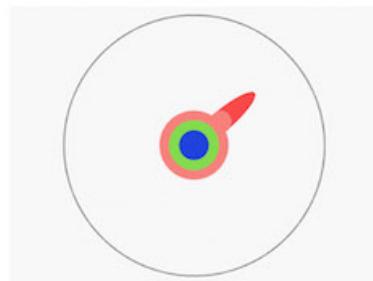
Reading research papers takes you to the edge of human knowledge:
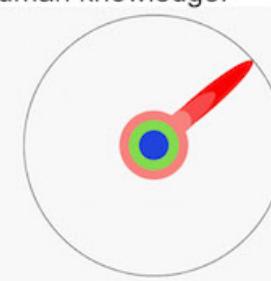
Once you're at the boundary, you focus:
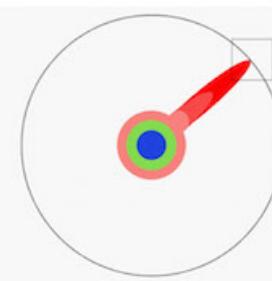
You push at the boundary for a few years:
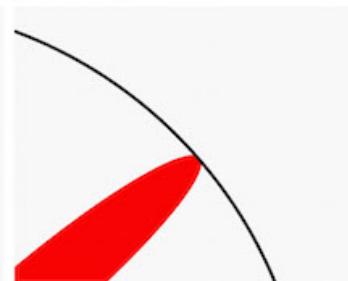
Until one day, the boundary gives way:
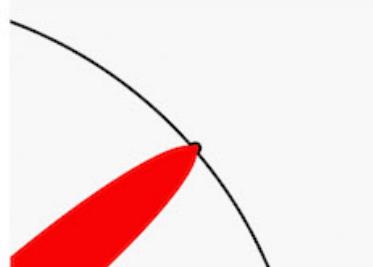
And, that dent you've made is called a Ph.D.:

Ph.D.
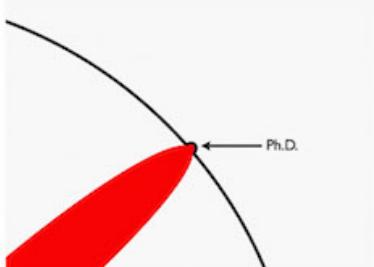
Of course, the world looks different to you now:

So, don't forget the bigger picture:
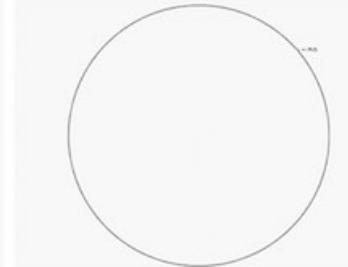
Keep pushing.

Literaturverwaltung im Prozess

Literatur- und Recherchedatenbank
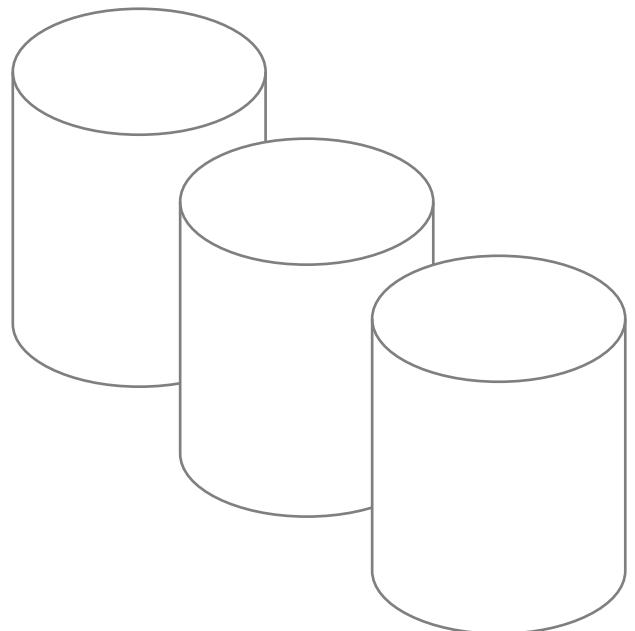
Literaturverwaltung

Textverarbeitung/ Textsatz

An index is a list of items pulled together for a purpose. Journal indexes (also called bibliographic indexes or bibliographic databases) are lists of journals, organized by discipline, subject, or type of publication.
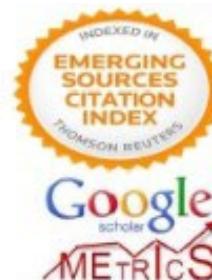
Plan of the Lecture

- Common errors

- Introduction / Methods writing : Q&A

- Abstract writing

- Conclusions writing

- Preliminary submission of contribution and presentation

Procedure for the elaboration
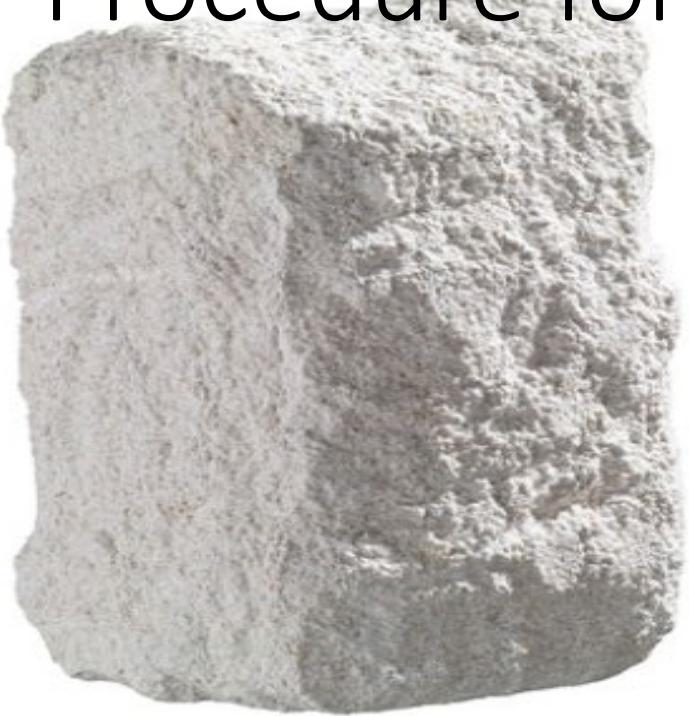
Laufend →
- Standard outline
- Subchapter
- Key points as key sentences
- Resources

Im Verlauf →
- Topic Sentences
- Formulate
- Discuss

Abschließend
- Linguistic refinement
- Spelling correction
- Proofreading

Methods: Q&A

Method

We employ a data science approach to answer the research question and use machine learning to investigate the predictability of heat pump characteristics (see Fig. 1). Below, we describe the dataset, the feature extraction, the application of machine learning algorithms, and the evaluation approach.

Fig. 1 Data science approach to evaluate heat pump predictions
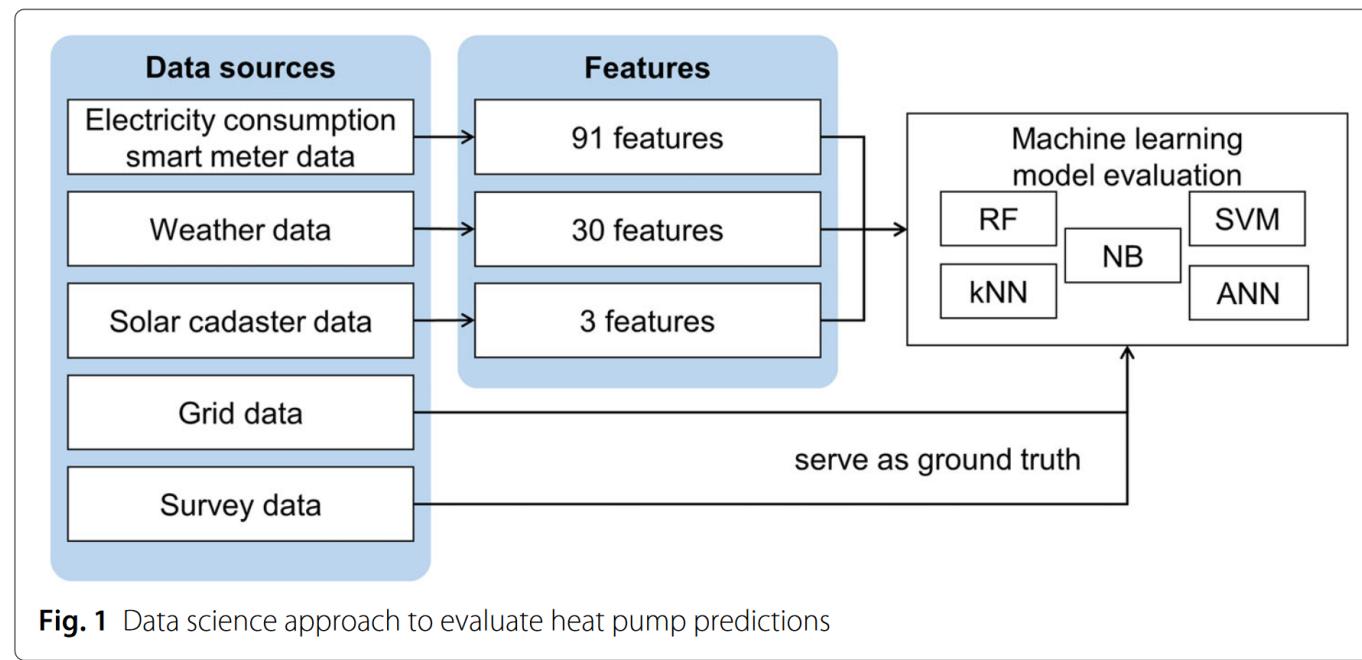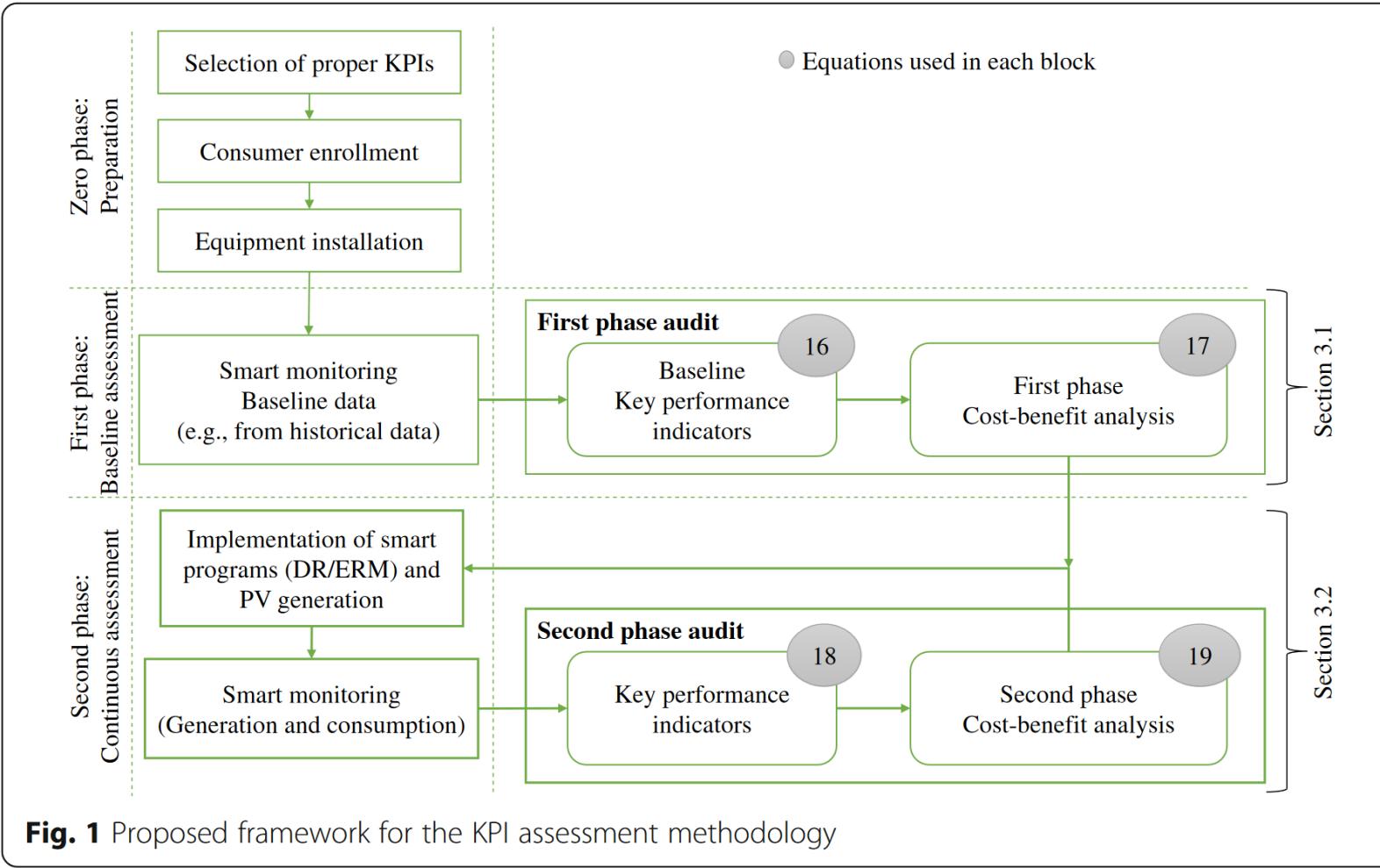
Fig. 1 Proposed framework for the KPI assessment methodology
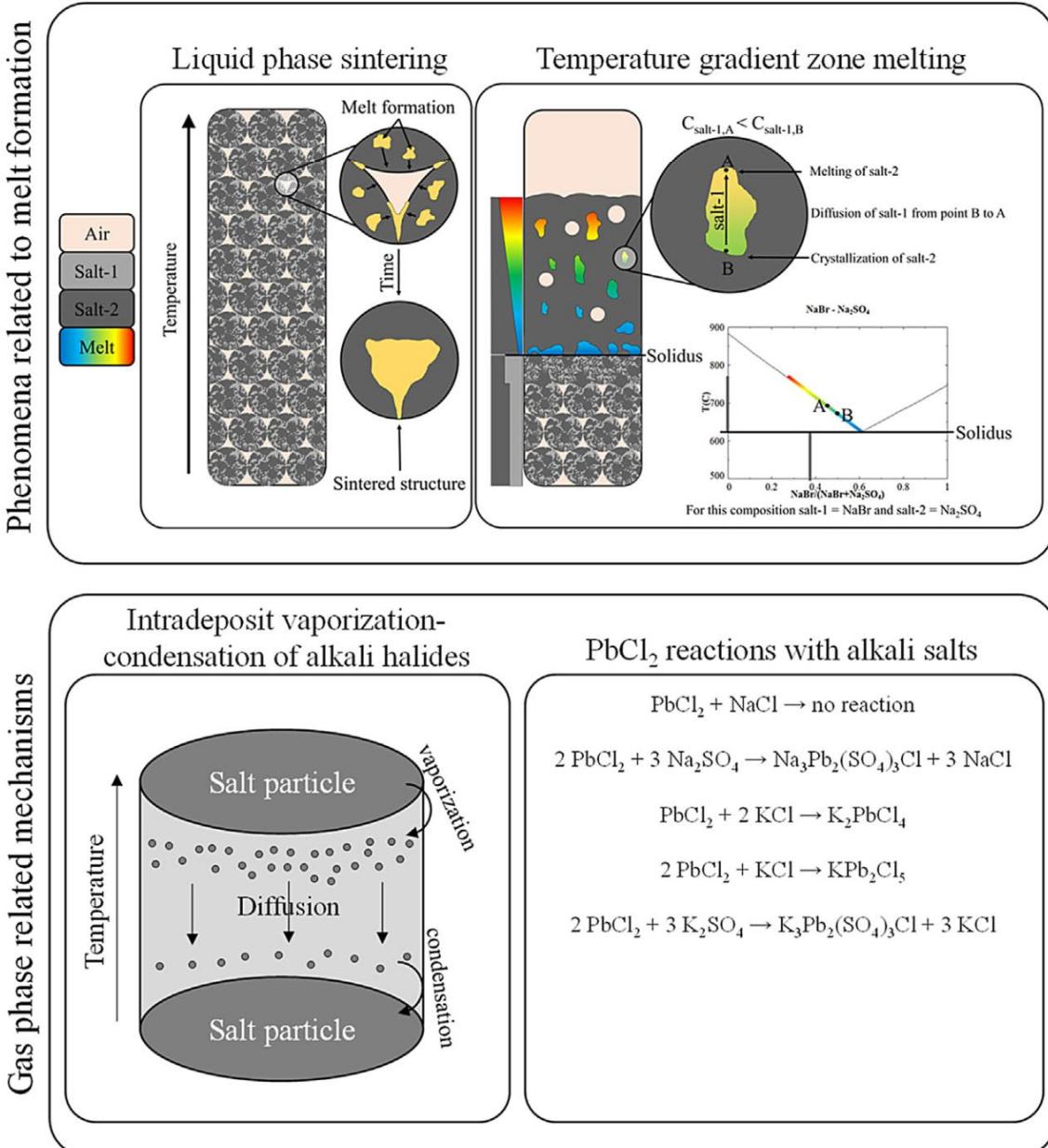
Fig. 1. Summary of the temperature gradient induced effects in laboratory experiments [7,8,10,11].

Introduction Q&A

Paper structure
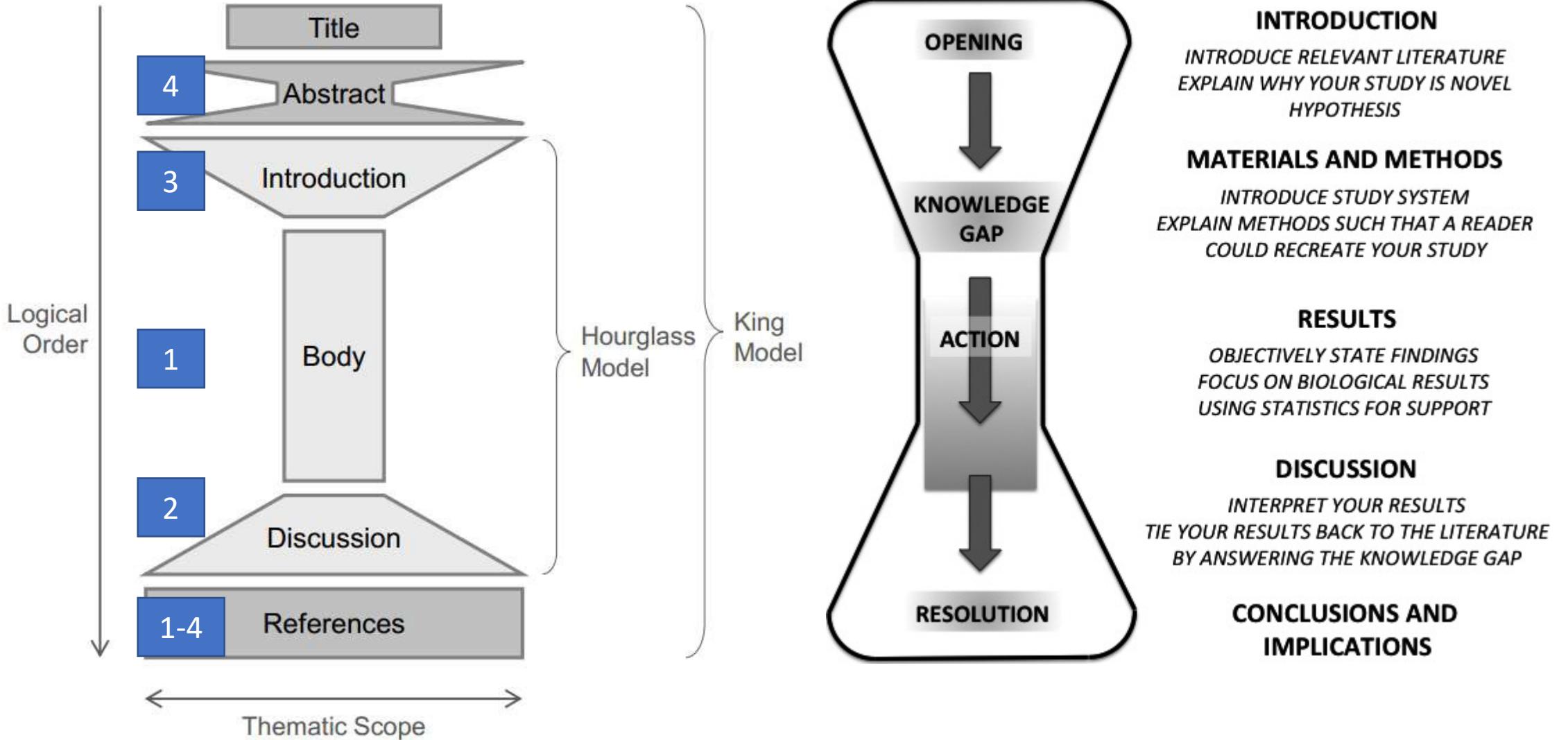
Ideas
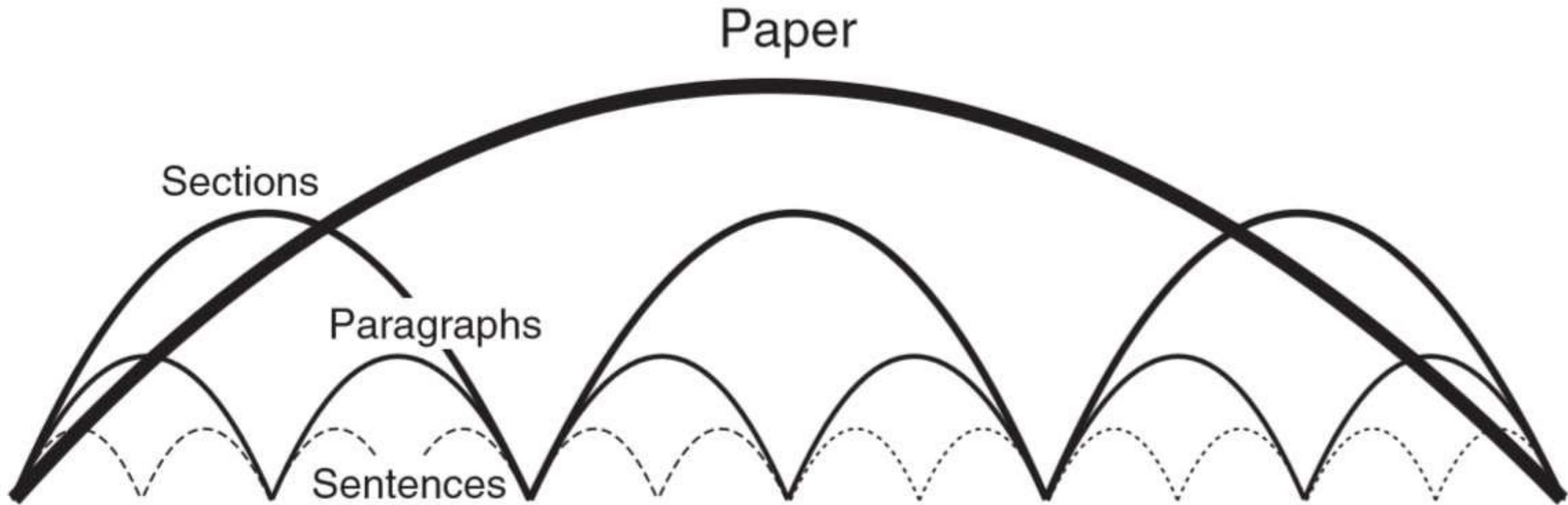
Commom Errors

Avoiding Plagiarism in Reporting

- Quotation: Paraphrasing, Summarising, Synthesising
  - Paraphrasing is writing the ideas of another person in your own words.
  - A summary is a shortened version of a text
  - A synthesis is a combination, usually a shortened version, of several texts made into one.

Commom Errors

Write down on a piece of paper your five most common mistakes

- Specific mistakes, "English in general" is not an mistake!
- Incorrect length of the main paragraphs of an article

Commom Errors

Write down on a piece of paper your five most common mistakes

- Specific mistakes, "English in general" is not an mistake!

- Incorrect length of the main paragraphs of an article

- Lack of coherence and consistency in what is being told
  - An article is a story

- Abbreviations (acronyms):
  - Repetition of the definition
  - Non-use of the abbreviation once it has been defined.
  - Inconsistent definition: Model View Controller (MVC) / MVC (Model View Controller)

- Consistency

Commom Errors

Rules for Abbreviations (acronyms):

- Use abbreviations that are familiar to the reader

- If there is no known abbreviation, you can create one.

- Create an abbreviation if you will use it at least three times in the text.

- Only use abbreviations when it makes reading easier, do not use them to shorten writing

Commom Errors

Which one is correct?

- Wetzel et al. (2004) show a negative correlation between snow density and air temperature that explains 52% of the variance.

- Wetzel et al. (2004) have showed a negative correlation between snow density and air temperature that explains 52% of the variance.

- Wetzel et al. (2004) showed a negative correlation between snow density and air temperature that explains 52% of the variance.

Which one is correct?

There is a tendency t... ...t past work, but ...

...ab... ...about think ab... ...current that is being disc...

The most important thing is not which but to be consistent and use the same one throughout the document

Commom Errors

Parallelism

All the elements must be syntactically and conceptually parallel:

- Verbs… verbs
- Nouns… Nouns

Commmom Errors

Example:

Incorrect: Children in Practice Group A and in Groups B and C received no visual stimuli, whereas those in Practice Group D were shown an image of a lion.

• **Correct:** The researchers provided no visual stimuli to children in Practice Groups A, B, and C, whereas researchers projected an image of a lion for children in Practice Group D.

I. INTRODUCTION

In recent years, data warehouse requirements engineering has emphasized the determination of the information contents of the warehouse To Be. Indeed, all work in data warehouse requirements engineering known to the authors considers this aspect only. Consider the three life cycles described in [19]. The main task in the data base driven [9] and ER driven [10] life cycles is to restructure data bases and ER diagrams respectively to determine the required facts and dimensions. Goal oriented approaches [2, 3, 9, 18, 19] explore system/organizational goals and determine star schemas. The recent proposal [17, 16] for building a data warehouse for formulation of rules for policy enforcement also focuses on the information aspect. [20] has introduced the notion of a target. Targets participate in two hierarchies, the relevance and fulfillment hierarchies. It has been shown that these hierarchies lead to determination of the information to be kept in the data warehouse to be. In [17, 20] the process of arriving at star schemas has been split into two parts (i) an 'early information' part where the information relevant to decision making is discovered and (ii) a 'late' part where the discovered information is structured as facts and dimensions.

Now, in concentrating on information discovery and structuring, data warehouse requirements engineering de-emphasizes an investigation into its functional aspect: what functions should be built for different stakeholders. We propose that one source of data warehouse functionality is business indicators. Computation of indicators in the absence of well-defined mathematical functions was considered in [1] but no attempt was made to elicit the set of functions needed in a data warehouse. Even though performance indicator systems like Performance Pyramid [15] and Balanced Scorecard [11] for developing performance indicators exist, defining the right indicators remains a major issue [5, 7, 22].

Work on requirements engineering for data warehouse functionality starts once indicators are finalized by business people. The first step in the requirements engineering task is to elicit these. However, business indicators are dispersed [22] in an organization and involve many people. Thus, a method for discovering stakeholders and their indicators is crucial for elicitation.

In this paper, we propose an elicitation mechanism for business indicators and then consider the needed functionality. For this purpose, we use the notion of a target hierarchy defined in [20]. A target is an association of a set of **indicators** with a **work aspect**. A work aspect is a work unit or a work area.

Our requirements engineering process is in two steps:

a) Identifying stakeholders and eliciting business indicators from them,

b) Determining indicator- sub-indicator hierarchy, thereby identifying functional requirements for computing indicators.

In the first step of requirements engineering process, a set of <S, BInd> pairs is identified where S is a stakeholder and BInd is the business indicator (computed by S) together with its arguments. In the second step, we construct use case diagrams so as to visualize the needed functionality for obtaining the business indicator. Our use case diagrams include two features in addition to those found in UML use case diagrams. These are (a) actor aggregation and (b) the *estimated from* relationship between use cases.

In the next section we present our Indicator model and use it for eliciting indicators. Section 3 deals with representation of BInd use case diagrams. Section 4 contains an example to

2 Eliciting business indicators

We define a business indicator as a function with arguments $x_1, x_2, \ldots x_n$, where x_i may be any of the following:

i) business indicator BInd, for example, BInd_College_Success Index = f(Engg. Success index, Science success index) – this consists of two arguments which are business indicators themselves.

ii) non- functional argument or information, other than business indicator. For example, Top5=f(marks_all_students) – this consists of a list of marks obtained by all students.

iii) function that is not a business indicator itself. For example, DeptSuccess_Index = f(count (passed_students), count (total_students)) – this consists of count function applied on a list of passed students and a list of total students respectively.

Based on this, we describe our Indicator Exchange Model and use this model as the basis for eliciting indicators and the indicator hierarchy.

2.1 The Indicator Exchange Model

Our indicator exchange model is based on the Organization Structure Model, (OSM). According to OSM [16], an organization consists of organization units that may be internal or external. The OSM guidelines for defining an organizational unit are that it must be persistent and be a formal association of persons. Thus, departments, divisions, committees, can all be units. A position is a role in an organization unit and there may be more than one person holding it. Assignments link people to positions. A person may have multiple assignments, linking them to multiple positions. Business Functions are OSM meta concepts for defining what an organizational does.

Fig. 1 shows our Indicator exchange model. This model

A non-empty set of *work* is associated to a *work aspect*. This *charged with* association is 1: n as shown. There are two kinds of work aspect, work unit and work area. The *work unit* of Fig. 1 is a recognized association of *positions*, reflecting the organizational structure. Thus *work unit* ISA *work* aspect. It can be seen that *work unit* corresponds to the OSM notion of organization unit. *Work area* is a recognized association of *positions* charged with a certain organization task. The Accounts Department of an organization is an example of a **work unit**: it is a set of positions and defines a structural organization unit. An example of **work area** is Tax Reform: it is a set of positions defined to reform tax computation and deduction.

We define two ternary relationships, *informs* and *reports to*, both of which are between a pair of *positions* and the *work* these positions carry out. The relationship *reports to* says that *position* P_i reports to *position* P_j, the *indicator* for a *work* responsibility and activity. Likewise, the relationship *informs* says that *position* P_i informs *position* P_j, the *indicator* for a *work* responsibility and activity.

As shown in Fig. 1, *business indicator* is an association class with attribute *indicator*. Since, more than one indicator may be reported/informed, it is a multi-valued attribute.

The difference between *reports to* and *informs* is that whereas the former captures indicator exchange between formal positions, the latter captures indicator exchange between positions that are not bound by the reporting structure of the organization chart.

As we will see, these two relationships

- Provide us a good starting point for indicator exchange elicitation. Specifically, through these relationships we can focus on *positions* as sources of indicators.
- Form a basis for capturing the dispersed business indicators of an organization referred to in the Introduction.

$BIndE_i$ is an argument of
$BIndS_i$
End if
End for
End if
End for
Elicit any other argument of $BIndS_i$
End for
End

The above algorithm is applied to each element of IPS also.

In our example we start with A from RPS. We do not find any such element in SentBInd, which means that A does not send business indicators to other positions. We move to the next element, B. B sends $\{BI_1, BI_2\}$ to A. We now look at ExpectsBInd for B and find that it contains $\{BI_1, BI_2\}$. Since both BI_1 and BI_2 are self generated by B, information required to compute these must be available to B itself. Further, these could only be ii) or iii) above. This information is elicited from B. Let the computation information elicited be $BI_1=f(I_{11}, I_{12})$ and $BI_2=f(I_{21})$.

Now, consider the next position D. D sends $\{BI_5, BI_6, BI_7\}$ to A and receives $\{BI_8, BI_9\}$ from E, $\{BI_{10}\}$ from F and $\{BI_{11}, BI_{12}\}$ from G. The computation information elicited is $BI_5=f(BI_8, BI_9)$; $BI_6=f(BI_{10}, I_{61}, I_{62})$ and $BI_7=f(BI_{11}, BI_{12}, I_{71})$. Now the business indicators for the remaining positions E, F and G are further examined and information is elicited. The resulting functions are $BI_8=f(I_{81}, I_{82})$; $BI_9=f(I_{91})$; $BI_{10}=f(I_{101}, I_{102})$; $BI_{11}=f(I_{111}, I_{112})$; $BI_{12}=f(I_{121})$.

The hierarchies for our business indicators are shown in Figure 3. As seen there are five hierarchies, for BI_1, BI_2, BI_5, BI_6 and BI_7 respectively.

a. **Actor aggregation**: If an indicator goes into estimating the value of another, then the stakeholder of the former is in the hierarchy of the latter. Thus, a stakeholder 'is part of' another stakeholder and we introduce the notion of aggregate actors in BInd Use Case diagrams. Notice that UML provides for actor specialization/generalization and not for actor aggregation.

b. *Estimated from* **relationship between use cases**: Since an indicator is estimated from another sub-indicator, the BInd use case diagram must contain one use case for the composite indicator and another for the sub-indicator. We now need to introduce a new relationship, *estimated from*, between use cases.

To understand the need for (b) above, consider the two UML relationships, extend and include:

a) **Extend** - specifies that a use case extends the base use case. The base use case may stand alone, but under certain conditions, its behaviour may be extended by the other.

b) **Include** - Specifies that the base use case explicitly incorporates the behaviour of another use case at a location specified by the base. The included use case never stands alone, but is only instantiated as part of some larger base that includes it.

The *estimated from* is a relationship between a base use case and an *estimated from* use case. Both use cases are capable of independent existence and have actors associated with them. The actor of the base use case interacts with the system and so does the actor of the *estimated from* use case. In this sense, the *estimated from* is different from UML's *include* relationship. It is also different from *extend* in that there is no extension of any behaviour. The indicator produced by the

BI₅

índices a determinadas zonas del vídeo y el acceso a recursos externos o actividades desde determinados puntos del vídeo. Algunas de estas actividades son exámenes de tipo test que se evaluarán automáticamente si es posible. Los resultados pueden utilizarse como retroalimentación del alumno o para análisis del profesor usando otros servicios externos. Finalmente, se proporciona una técnica de almacenamiento masivo de los resultados en las imágenes de un vídeo que puede ser consultado para extraer dichos datos.

En el desarrollo de este sistema se han utilizado, entre otras, técnicas de metamodelado, lenguajes de marcado XML y OpenCV.

Abstract

Online education and especially MOOC (Massive Open Online Courses), use massively videos whose design need new techniques that integrates naturally learning resources and activities of the students in the video. The VideoData system facilitates the creation of quality content for online education, called hypervideo, specifying indexes to certain areas of the video and access to external resources or activities from certain video points. Some of these activities are multiple choice exams that are automatically evaluated if it's possible. Results can be used as student feedback or analyzed using other external services. Finally, it is provided a technique for massive storage of the results in video frames, which can be consulted to extract data. In the development of this system they have been used, among others,

1. Motivación

La educación on-line [1] es un tipo de educación a distancia que hace uso de Internet y de las tecnologías de la información y la comunicación con el objetivo de facilitar el proceso de aprendizaje.

Una modalidad de educación online, que se ha extendido en los últimos años, es el uso de plataformas MOOC [2]. Estas siglas proceden del inglés Massive Open Online Course y sirven para designar cursos masivos, abiertos y online. Sin embargo, diferentes problemas están surgiendo en su desarrollo, como son el contenido de baja calidad, una alta tasa de abandono, problemas de evaluación y la gestión de datos masivos que resultan de estos cursos [14,15].

En la educación online, y especialmente en los MOOC, el uso de vídeos docentes resulta el mejor tipo de documento para llegar de forma directa al alumno. Por ello es frecuente que el diseño de un curso MOOC gire alrededor de una colección de vídeos a partir de los cuales se proponen actividades a los alumnos. Se necesitan nuevas técnicas en el diseño de vídeos docentes, que integren de forma natural los recursos de aprendizaje, las actividades y las pruebas de evaluación de los alumnos dentro del vídeo. Este nuevo tipo de recursos los denominaremos hipervídeo.

VideoData[] es un sistema integrado que permite diseñar cursos on-line basados en hipervídeos. Para ello se parte de un modelo educativo en el que destacamos las fases de creación de contenidos, evaluación y análisis y almacenamiento de resultados.

En este trabajo destacaremos dos aspectos de VideoData. El primer aspecto ha sido definir las funcionalidades que definen un hipervídeo y los parámetros

Editorial: Evidence-Based Guidelines for Avoiding the Most Common APA Errors in Journal Article Submissions

Anthony J. Onwuegbuzie, Julie P. Combs, John R. Slate, and Rebecca K. Frels
Sam Houston State University

In this editorial, we provide evidence-based guidelines to help authors avoid committing APA errors. Specifically, we provide guidelines for adhering to APA style using findings from Combs, Onwuegbuzie, and Frels' (2010) mixed analysis of 110 manuscripts submitted to Research in the Schools over a 6-year period. Combs et al. identified the 60 most common APA errors grouped into 14 themes. We contend that an efficient way for authors to learn APA style is to focus initially on these common errors and error themes. Further, we contend that these errors provide useful starting points for persons who teach APA style. Finally, authors of the APA Publication Manual might use this information to determine which rules and guidelines to emphasize.

As co-editors and first-round copyeditors of *Research in the Schools* (John R. Slate and Anthony J. Onwuegbuzie), outgoing editor and associate editor of *Educational Researcher* (Anthony J. Onwuegbuzie and Julie P. Combs, respectively), recent guest editor of the *International Journal of Multiple Research Approaches* (Anthony J. Onwuegbuzie), editorial assistant/production editor of *Research in the Schools* (Rebecca K. Frels), and reviewers for and editorial board members of numerous journals, we have observed the difficulties that many authors have experienced in conforming to the guidelines specified

without an adequate knowledge of the *Publication Manual* style. Unfortunately, this inadequacy likely makes the transition from doctoral student to beginning author to emergent scholar more difficult. Indeed, over the years, we have observed that some of our reviewers (i.e., editorial board members) have extremely low tolerance for APA errors. Thus, it is clear that authors who submit manuscripts to journals wherein APA style is required would benefit from becoming as familiar as possible with the *Publication Manual*.

Unfortunately, during the last 9 years, authors

Abstract Writing

- Lesen Sie sich die drei folgenden Abstracts durch.

- Wie aussagekräftig sind die Abstracts und welchen Ein- bzw. Überblick liefern sie bzgl. der zugrundliegenden Forschung? Haben Sie danach eine Idee, was die Autoren gemacht und herausgefunden haben?

- Werten Sie die drei Abstracts aus und versuchen Sie ein Schema für eine Standardgliederung eines Abstracts zu entwickeln.

Zeitansatz: 20 min

Schnelle Augenbewegungen und visuelle Fixation bei Kindern mit ADHS

Die Aufmerksamkeitsdefizit/Hyperaktivitätsstörung (ADHS) gehört zu den bedeutendsten psychiatrischen Störungen des Kindes- und Jugendalters. Der Beitrag zeigt auf, wie moderne Blickbewegungs-Systeme helfen, die neurokognitiven Grundlagen der ADHS weitergehend zu erforschen. Exemplarisch wird eine Studie vorgestellt, die kompensatorische Effekte einer Stimulanzien-Medikation auf Fähigkeiten der exekutiven Kontrolle von ADHS-Kindern untersucht. Dazu wurden medikamentös behandelte ADHS-Kinder und gesunde Kontrollkinder in einer Zeitreproduktions- und einer Augenbewegungsaufgabe getestet, die entweder eine aktive Inhibition oder Ausführung von Prosakkaden erforderte. Beide Gruppen zeigten vergleichbar präzise und interferenzstabile Zeitreproduktionen sowie eine vergleichbare Anzahl, Latenz, Amplitude und Dauer von Prosakkaden. Die Ergebnisse lassen eine weitgehende pharmakologische Kompensation von Auffälligkeiten der exekutiven Kontrolle vermuten. Jedoch konnte für ADHS-Kinder unter Medikamenteneinfluss (im Vergleich zu gesunden Kindern) eine signifikant erhöhte Spitzengeschwindigkeit von Prosakkaden beobachtet werden, die einen diagnostisch relevanten Augenbewegungs-Parameter darstellen könnte.

Folta, K. & Mähler, C. (2011). Schnelle Augenbewegungen und visuelle Fixation bei Kindern mit ADHS. *Kindheit und Entwicklung*, 20, 21-30.

Looks and Lies: The role of physical attractiveness in online dating self-presentation and deception.

This study examines the role of online daters' physical attractiveness in their profile self-presentation and, in particular, their use of deception. Sixty-nine online daters identified the deceptions in their online dating profiles and had their photograph taken in the lab. Independent judges rated the online daters' physical attractiveness. Results show that the lower online daters' attractiveness, the more likely they were to enhance their profile photographs and lie about their physical descriptors (height, weight, age). The association between attractiveness and deception did not extend to profile elements unrelated to their physical appearance (e.g., income, occupation), suggesting that their deceptions were limited and strategic. Results are discussed in terms of (a) evolutionary theories about the importance of physical attractiveness in the dating realm and (b) the technological affordances that allow online daters to engage in selective self-presentation.

Toma, C.L. & Hancock, J.T. (2010). Looks and Lies: The role of physical attractiveness in online dating self-presentation and deception. *Communication Research*, 37, 335-351.

Disruptive Technologies: Catching the Wave

One of the most consistent patterns in business is the failure of leading companies to stay at the top of their industries when technologies or markets change. Why is it that established companies invest aggressively–and successfully–in the technologies necessary to retain their current customers but then fail to make the technological investments that customers of the future will demand? The fundamental reason is that leading companies succumb to one of the most popular, and valuable, management dogmas; they stay close to their customers. Customers wield extraordinary power in directing a company's investments. But what happens when a new technology emerges that customers reject because it doesn't address their needs as effectively as a company's current approach? In an ongoing study of technological change, the authors found that most established companies are consistently ahead of their industries in developing and commercializing new technologies as long as those technologies address the next-generation-performance needs of their customers. However, an industry's leaders are rarely in the forefront of commercializing new technologies that don't initially meet the functional demands of mainstream customers and appeal only to small or emerging markets. To remain at the top of their industries, managers must first be able to spot the technologies that fall into this category. To pursue these technologies, managers must protect them from the processes and incentives that are geared to serving mainstream customers. And the only way to do that is to create organizations that are completely independent of the mainstream business.

Bower, L.J. & Christensen, C.M. (1995). Disruptive Technologies: Catching the Wave. Harvard Business Review, 1, 43–53

- Lesen Sie sich die drei folgenden Abstracts durch.

- Wie aussagekräftig sind die Abstracts und welchen Ein- bzw. Überblick liefern sie bzgl. der zugrundliegenden Forschung? Haben Sie danach eine Idee, was die Autoren gemacht und herausgefunden haben?

- Werten Sie die drei Abstracts aus und versuchen Sie ein Schema für eine Standardgliederung eines Abstracts zu entwickeln.

Zeitansatz: 20 min

"The growing economic resemblance of spouses has contributed to rising inequality by increasing the number of couples in which there are two high- or two low-earning partners. The dominant explanation for this trend is increased assortative mating. Previous research has primarily relied on cross-sectional data and thus has been unable to disentangle changes in assortative mating from changes in the division of spouses' paid labor—a potentially key mechanism given the dramatic rise in wives' labor supply. We use data from the Panel Study of Income Dynamics (PSID) to decompose the increase in the correlation between spouses' earnings and its contribution to inequality between 1970 and 2013 into parts due to (a) changes in assortative mating, and (b) changes in the division of paid labor. Contrary to what has often been assumed, the rise of economic homogamy and its contribution to inequality is largely attributable to changes in the division of paid labor rather than changes in sorting on earnings or earnings potential. Our findings indicate that the rise of economic homogamy cannot be explained by hypotheses centered on meeting and matching opportunities, and they show where in this process inequality is generated and where it is not." (p. 985)

The first sentence introduces the **topic** under study (the "economic resemblance of spouses"). This sentence also implies the **question** underlying this research study: what are the various causes— and the interrelationships among them—for this trend?

These next two sentences explain what **previous research** has demonstrated. By pointing out the limitations in the methods that were used in previous studies, they also provide a **rationale** for new research.

The data, research and analytical **methods** used in this new study.

The major **findings** from and **implications** and **significance** of this study.

- Schnelle Übersicht über die Gesamtarbeit
- Abdeckung aller Kapitel
- Entweder abschließende Information oder
- Anregung zur weiteren Lektüre

- Motivation – Problemstellung

- Ansatz / Vorgehen (Material und Methode)

- Ergebnisse

- Schlussfolgerungen

-> Was ist neu oder besonders am Beitrag für die Disziplin?

- Kurze Sätze und verständliche Sprache

- Keine Zitate

- Keine Abbildungen, Tabellen und Diagramme

- Kein Copy-Paste aus dem Haupttext

- Nur Hauptkennzahlen bei Material und Methode

- Heben Sie hervor, was an Ihrem Beitrag neu und besonders für die Disziplin ist

- Adressieren Sie das Thema der Konferenz oder des Journals (Prof fragen)

- Achten Sie auf Schlüsselwörter sowohl des übergeordneten Themas als auch Ihres Beitrags

Empirical determinants of renewable energy deployment: A systematic literature review

ABSTRACT

A large share of greenhouse gas emissions can be attributed to the energy sector. Renewable energy (RE) appears to be a mean to decarbonize economies. To fight global warming, which might have substantial impacts on ecosystems and economies, it is essential to understand the empirical determinants of RE deployment for public policy guidance and to foster future research. This paper aims to review the growing, though limited, body of literature that has emerged in the late 2000s to study the quantitative determinants of RE development at a country level. Results show that there is little consensus on the influence of the economic, environmental, and energy-related determinants predominantly studied. The other main determinants considered are regulatory, political, and demographic. Results are often tempered by the fact that authors use diverse measures of RE deployment and have a variety of frameworks. This paper ends with several recommendations to improve the comparability of future papers to enhance their potential to make credible public policy recommendations. More specifically, the recommendations concern the choice of a RE deployment indicator, the determinants considered for further exploration, and the methodologies adopted.

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Bourcet, Clémence. "Empirical determinants of renewable energy deployment: a systematic literature review." *Energy Economics* (2019): 104563.

An extensive comparative study of cluster validity indices

ABSTRACT

The validation of the results obtained by clustering algorithms is a fundamental part of the clustering process. The most used approaches for cluster validation are based on internal cluster validity indices. Although many indices have been proposed, there is no recent extensive comparative study of their performance. In this paper we show the results of an experimental work that compares 30 cluster validity indices in many different environments with different characteristics. These results can serve as a guideline for selecting the most suitable index for each possible application and provide a deep insight into the performance differences between the currently available indices.

Arbelaitz, Olatz, et al. "An extensive comparative study of cluster validity indices." *Pattern Recognition* 46.1 (2013): 243-256.

Renewable energy drivers: a panel cointegration approach

ABSTRACT

The expected gains from RES deployment to the reduction of carbon dioxide emissions (CO_2) and the cut-off of external dependence of electricity sources could be important. However, it is crucial to understand the determinants of RES growth to help policymakers drawing effective energy polices, involving a commitment of both citizens and governments. In this paper, we use novel panel econometric tools (taking into account structural breaks and cross-section dependence) and find evidence of nonstationary issues and cointegration issues between renewable energy production and its drivers (CO_2 emissions, GDP per capita, energy use and dependency). The results thus reveal that non-stationary issues should be attended, otherwise they could be biased. Using suitable estimators (DOLS, FMOLS) with two different data sets and different proxies and taking common factors into account by MG estimates, we find that there is no environmental concerns effect explaining the growth of renewables in European countries. However, national revenues, energy consumption (demand effect) and energy dependency have a positive impact on renewables deployment. Considering these results, economic assistance (subsidies) might be a mean to increase further the renewables deployment in EU countries and education about renewables deployment is needed.

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Cyber security meets security politics: Complex technology, fragmented politics, and networked science

Myriam Dunn Cavelty ⬤ and Andreas Wenger

Center for Security Studies, ETH Zürich, Zürich, Switzerland

ABSTRACT

In the last decade, cyber incidents have become more expensive, more disruptive, and in many cases more political, with a new body of theoretically informed research emerging in parallel. This article provides the intellectual history to situate this literature in its broader evolutionary context. After identifying and discussing six drivers from the fields of technology, politics, and science that have been influential in the evolution of cyber security politics and how it is studied, we describe three historically contingent clusters of research. Using the same driving factors to look into the future of research on cyber security politics, we conclude that it is a vibrant and diverse biotope that is benefitting from its interdisciplinarity, its relevance for policy, and its cognizance of the interplay between technological possibilities and political choices of state actors.

Paradox of choice and sharing personal information

Takeshi Ebina[1] · Keita Kinjo[2]

Abstract

The purpose of this study is to investigate the relationship between a firm's strategy and consumers' decisions in the presence of the paradox of choice and sharing personal information. The paradox of choice implies that having too many choices does not necessarily ensure happiness and sometimes having less is more. A new model is constructed introducing a factor of information sharing into the model of a previous study that embedded the paradox of choice only (Kinjo and Ebina in AI Soc 30(2):291–297, 2015). A key feature of the model is its disutility function. It is demonstrated that if the sign of the cross derivative of the function is positive (negative) at the optimum, there is a positive (negative) correlation between the degree of sharing personal information chosen by the consumers and the number of products offered by the firm in its recommendation systems. It is also numerically indicated that the profit function of the firm becomes convex or concave depending on the shape of the disutility function. These results suggest that firms should carefully investigate the shape of the disutility function, under the paradox of choice and sharing personal information.

Kapitel: Schlussfolgerungen & Ausblick

Struktur des Kapitels

1 • Übergang/Rückbezug: Aufgreifen der Forschungsfrage / Ziele

2 • Schlussfolgerungen aus eigenen Daten und Diskussion (Kernaussagen)

3 • Handlungsempfehlungen (?)

4 • Ausblick auf weiterführende Untersuchungen, alternative Theorien, nächste Forschungsschritte
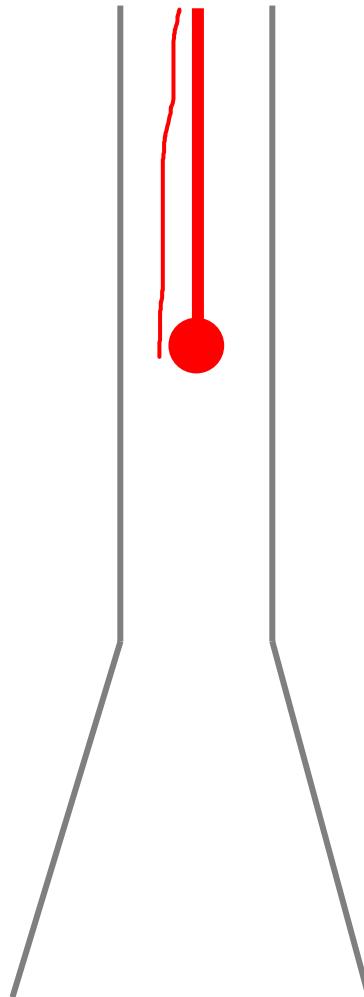
Konferenzvortrag

Writing strategy

Prof. Dr. Javier Valdes
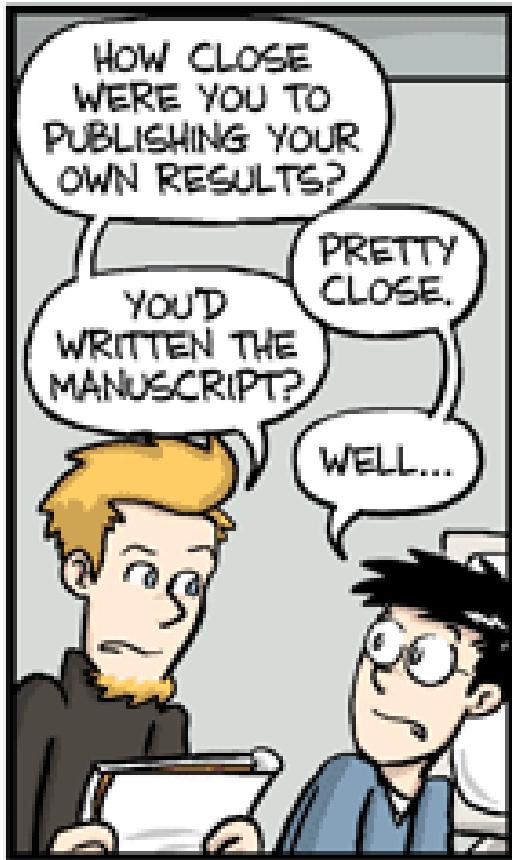
Time management

Time management

	1	2	3

Literature

Gap

Theory development

Methods

Definition

Test

Application

Special case

Analysis

Base cases

Special cases

Discussion

Time management

Lab book use at various levels of academia

BSc Student | PhD Student | Post Doc | Senior researcher | Prof

Whats a 'lab'?
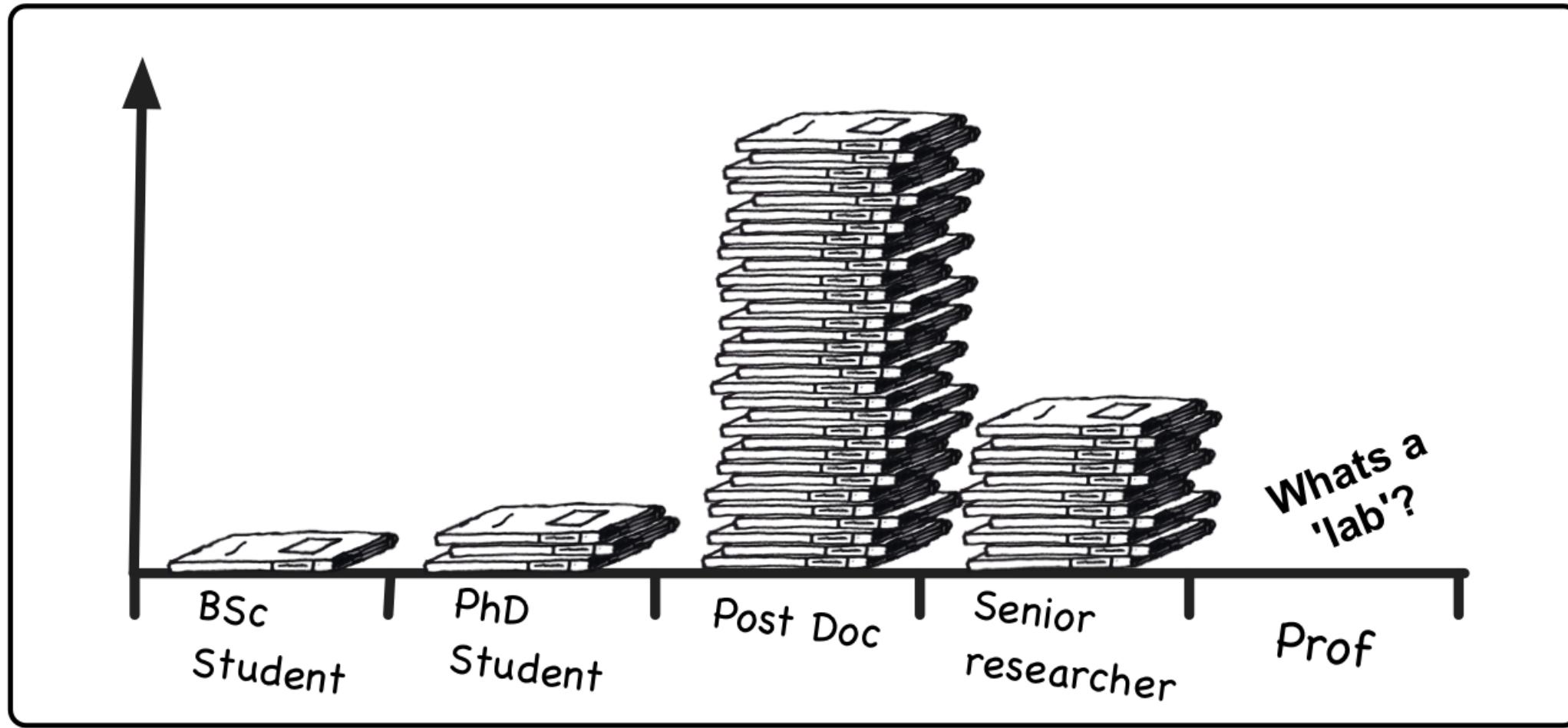
It can also have a role in protecting any intellectual property that comes from the research

Beispiel Call for Paper

Call for Papers

We are pleased to invite you and your institution to participate in the 2020 10th International Conference "Advanced Computer Information Technologies" that will be held on May 13-15, 2020 in Deggendorf, Germany.

Important Dates

Paper submission deadline - **17th February 2020**

Notification of acceptance - **29th March 2020**

Final camera ready deadline - **12th April 2020**

Online registration deadline - **21th June 2020**

Fee payment deadline - **30th June 2020**

Submission Guidelines

The final version of a paper must be 4-6 pages and be prepared according to the following guidelines (IEEE Proceedings Format) in DOC or DOCX formats (in English only). An extra fee of EUR 20 will be charged for each additional page above 4 pages. The paper should be submitted using EasyChair services. The paper should define the scope of the paper, emphasizing new advances, theories and/or applications and include an analysis of results.

Conference Topics

1. Mathematical models of objects and processes
2. Specialized computer systems
3. Artificial intelligence and machine learning
4. Software engineering
5. Information in economic activity and digital business modeling
6. Smart Grids and Intelligent Consumers
7. Cybersecurity and IT Law
8. Image processing
9. Information technologies in historical sciences

Awards and Publications

Accepted conference content will be submitted for inclusion into IEEE Xplore as well as other Abstracting and Indexing (A&I) databases. Conference Proceedings will be published before the Conference start. Proceedings will be indexed with the ISBN number.

Best of presented papers on the Conference will be recommended in extended articles for publication in a special issue of "Advances in Cyber-Physical Systems".

Quelle: acit.tneu.edu.ua

Time management

Vorlauf Beitragseinreichung

Formale Fristen

Call for paper

Frist für Einreichung

Frist für Review

Einreichung finale Fassung

Deadline für Registrierung

Vortrag

12 Monate

Zusätzliche Meilensteine

Auf dem Radar

Interner Review

Review durch Muttersprachler

Übermittlung Folien und Lebenslauf
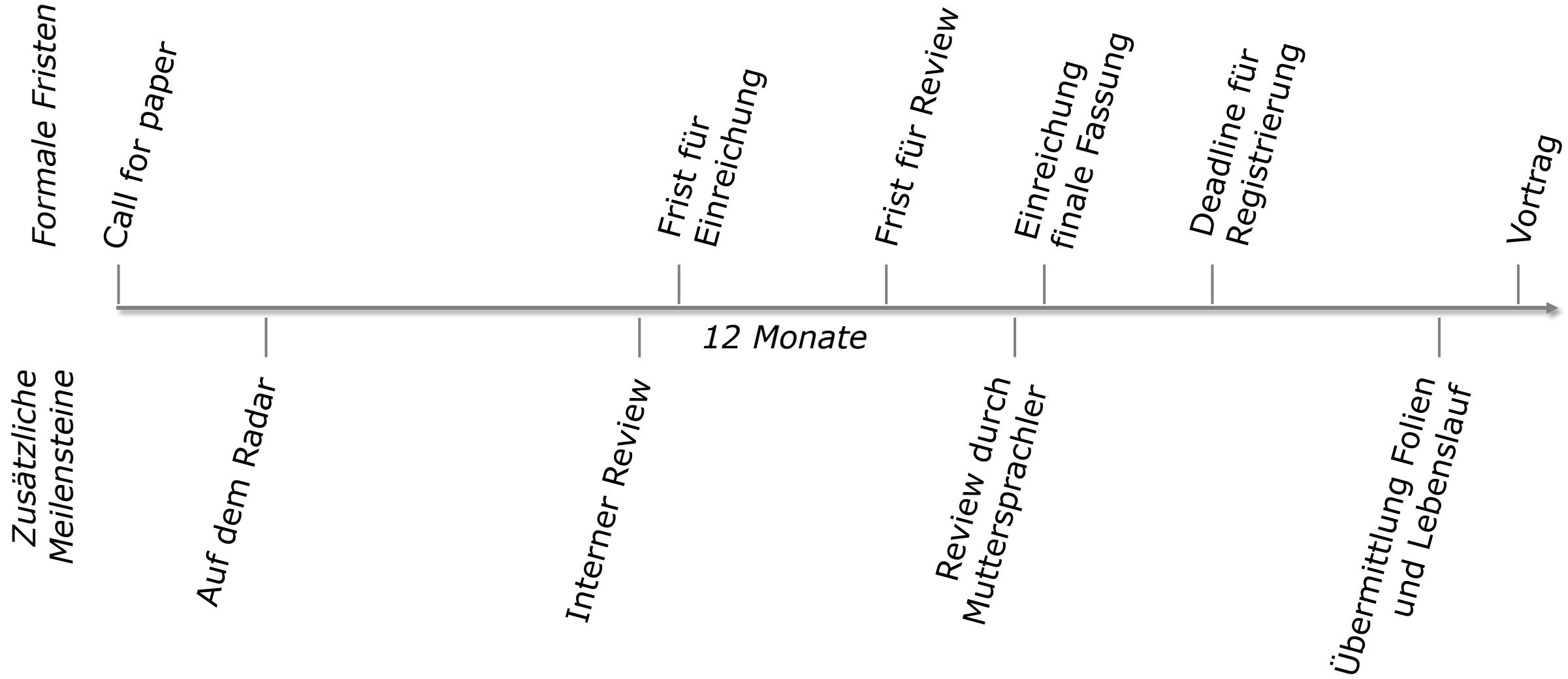
Vortrag - Ablauf
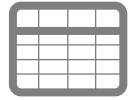
- Vortrag im Vorfeld übermitteln, Lebenslauf

- 15-30 min vor Session im Raum sein

- Dauer des Vortrags 12-15 min (inkl./exkl. Diskussion)

- Techniktest, Powerpoint einspielen (USB-Stick)

- Schlussfolie

- mit Chair abstimmen

- Anmoderation oder nicht?

Tipps für Aufbau Foliensatz

- Titelfolie
- Kein Inhaltsverzeichnis -> Standardgliederung
- Englische Schlüsselbegriffe auf Folie
- Notizzettel A5 (Karteikarten als Koderationskarten) mit handschr. Notizen
- Schlussfolie

Tipps für den ersten Vortrag

- Als erster im Raum sein
- Perspektive der Bühne erproben
- Powerpoint einspielen uns testen
- Gespräch mit Chair
- Platz in der ersten Reihe wählen
- Gehen, stehen, atmen, reden
- Ersten und letzten Satz auswendig lernen
- Vorbereitet sein, dass man von Chair vorgestellt wird (oder nicht)

Konferenzposter

Vorgaben und Vorüberlegungen

- Art der Posterpräsentation:
  Postersession / Postervortrag / Postertrain

- Interaktion (Tablet / Smartphone)

- Begleitmaterial
  - Visitenkarten
  - Abstract oder Poster als Handout in A4
  - Gummibärchen

- Formatvorgabe (A1 oder A0 – Hoch/Querformat)
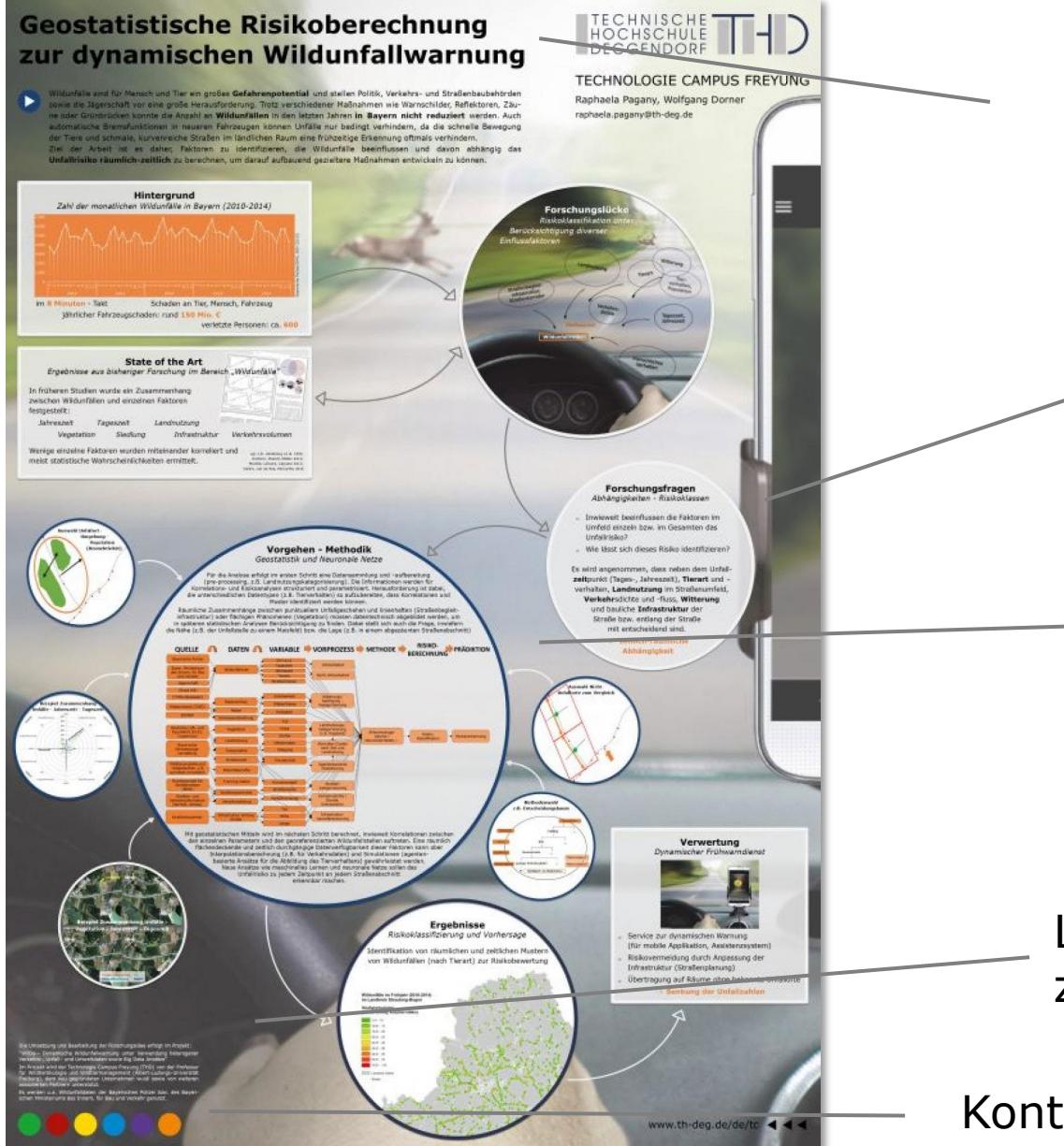
Überschrift leserlich
aus 10-20m Entfernung

Texte leserlich
mit 1-2m Abstand

Graphische Aufbereitung
des Themas (max. 500 Wörter)

Links und Erlaubnis
zu Fotographieren

Kontaktdaten

Gleichgewicht

Poster 1: MUSEUM UPLOADED – INTERAKTIVE TECHNOLOGIEN IM MUSEUM

TECHNISCHE HOCHSCHULE DEGGENDORF — THD
Přírodovědecká fakulta — Faculty of Science / Jihočeská univerzita v Českých Budějovicích — University of South Bohemia in České Budějovice
PRÁCHEŇSKÉ MUZEUM V PÍSKU
DEGGENDORF Stadtmuseum

Wie alle öffentliche Institutionen, sind Museen heute auf eine digitale Infrastruktur im Haus und in den Ausstellungen angewiesen. Oft sind die enormen Kosten und der personelle Aufwand Hindernisse in der Implementierung. Gleichzeitig wird Aktualität im Museum immer wichtiger. Veraltete Inhalte wirken unattraktiv und Museumsbesucher*innen erwarten Interaktion und Möglichkeiten der aktiven Auseinandersetzung. Es besteht ein großer Bedarf an digitalen Technologien, die es auch kleinen und mittelgroßen Museen erlauben digitale Inhalte in den Ausstellungen ohne externe Dienstleister aktuell zu halten und zentral zu verwalten. Eine Schlüsselfunktion ist zusätzlich ihre Funktion als Schnittstelle von musealem und digitalem Raum.

TECHNOLOGIE CAMPUS FREYUNG
Anja Braehmer [anja.braehmer@th-deg.de],
Mariann Juha, Anne Weinfurtner, Wolfgang Dorner

Keine Möglichkeit auf Feedback von den Besucher auf das Medium
Kein direktes Erstellen und Pflege von Content möglich
Fehlende Schnittstelle aus Archivsystem in Präsentationsmedium
Fehlendes Feedback aus Präsentationsmedium an Museumsmitarbeiter

Die Abbildung veranschaulicht den klassischen Prozess bei der Erstellung von digitalen Präsentationen im Museum und zeigt die Defizite von Schnittstellen auf

Ziele
- Datenaktualität im Museum
- Interaktives, spannendes Besucher-erlebnis
- Workflowoptimierung für Museumsmit-arbeiter*innen
- Barrierefreie Ausstellung (Mehrsprachiger Inhalt, Leichte Sprache, Video-Untertitel)
- Partizipation: Präsentation von musealen Inhalten im digitalen Austausch mit den Besucher*innen am oder dem realem Ort (via AR in App)
- Bau eines interaktives Stadtmodells

Methodik
Digitalisierung wird durch drei Maßnahmen forciert: 1) Ein Content-Management-Systems (CMS), das es dem Museums-personal erlaubt neue Inhalte flexibel in die Ausstellung einzupflegen, 2) eine App, die es ermöglicht die Museums-exponate in ihrem ursprünglichen, hier städtischen, Kontext zu er-kunden sowie 3) ein interaktives Stadtmodell, das die Besucher*innen in ihrer kulturland-schaftlichen Umgebung verortet

Visualisierung der vernetzten Komponenten im Projekt Museum Uploaded

Erste Ergebnisse
- Sammlung und Auswertung von Best Practice Beispielen
- Untersuchung des Verhalten von Besucher*innen bzw. Affinität bzgl. Nutzung digitaler Angebote im Museum
- CMS und DSS Anforderungen aus Sicht eines Museums
- Erste Entwürfe des CMS+DSS User Interfaces
- Partizipation im Museum: Stadtgespräche und Nutzung der Partizipationsplattform PUBinPLAN (www.pubinplan.th-deg.de)
- Konzeption und Erarbeitung neuer wiss. Inhalte für die neue Dauerausstellung im Stadtmuseum Deggendorf (z.B. durch Zeitzeugen-Interviews)

Erster Entwurf des CMS+DSS User Interfaces für die Verwaltung von Medienstationen im Museum

www.tc-freyung.th-deg.de
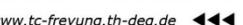
Poster 2: Orientierungshilfe für Touristen

Aufwertung von Themenwegen und Kulturgütern durch digitale Navigations-unterstützung und Virtual Reality

TECHNISCHE HOCHSCHULE DEGGENDORF — THD
ZÁPADOČESKÁ UNIVERZITA V PLZNI
ÚHLAVA obecně prospěšná společnost

Das EU Projekt Peregrinus Silva Bohemica untersucht die Möglichkeiten des Einsatzes von Navigationsunterstützung und 3D Modellen an Themenwegen. Als Projekt der angewandten Forschung und Entwicklung soll hierzu eine Anwendung entwickelt und getestet werden, die Besucher entlang bereits bestehender Barockthemenwege im Bayerisch-Böhmischen Grenzraum führt und für ausgewählte Bauwerke eine multimediale und virtuelle Informationsbasis darstellt. Insbesondere soll an Konzepten der Virtual und Augmented Reality getestet werden, inwieweit diese durch Verknüpfung mit multimedialen Inhalten als Informations- und Orientierungsgrundlage für Touristen in und an Kulturgütern eingesetzt werden können.

Technologie Campus Freyung
Wolfgang Dorner [wolfgang.dorner@th-deg.de], Ernst Jürgens, Laura Fliegler, Martin Müller, Sebastian Schröck, Mariann Juha

Westböhmische Universität Pilzen
Pavel Vondráček, Martina Vichrová, Pavel Hájek, Václav Čada, Radek Fiala, Otakar Čerba

1. Problemstellung
2. Themenwege
3. Ausgangssituation
4. Methodik des Ansatzes
5. Erste Ergebnisse
6. Ausblick & Vision

www.tc-freyung.th-deg.de

Poster 3: SMART GRID LABORATORY

TECHNISCHE HOCHSCHULE DEGGENDORF — THD

EIN GRENZÜBERGREIFENDES LABOR SIMULIERT EIN MODERNES STROM-NETZ UND GIBT DEN KMU STROMVERBRAUCHSEMPFEHLUNGEN, DIE DIE LASTSTEUERUNG EINER KOLLABORATIVEN INDUSTRIE-4.0-FERTIGUNGS-UMGEBUNG NUTZT, UM DYNAMISCH AUF BEDARFSSCHWANKUNGEN UND VERFÜGBARKEIT NACHHALTIGER ENERGIEQUELLEN ZU REAGIEREN.

SMART GRID LABORATORY

pubinplan.th-deg.de/tdf7

Postervortrag – Vorbereitung und Ablauf
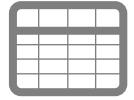
Datum/Uhrzeit für Anbringung Poster und Postersession

Personen einladen das Poster zu besuchen (Standnummer)

Ca. 10 min vor Postersessionbeginn anwesend sein

Präsenzzeit nutzen

Besuchern aktiv anbieten das Poster zu erläutern