Online ISSN : 2249-460X
Print ISSN : 0975-587X
DOI : 10.17406/GJHSS

# Global Journal

## of Human Social Sciences: G

# Linguistics & Education



Systematic Review of School

Behaviorism, Innatism, Cognitivism

Highlights

Moral Education through Literature

Empirical Research on Occupational

**Discovering Thoughts, Inventing Future**

VOLUME 19 ISSUE 10 VERSION 1.0

© 2001-2019 by Global Journal of Human Social Sciences, USA

Volume 19 Issue 60 was originally issued as G10

Global Journal of Human-Social Science: G
Linguistics & Education

Volume 19 Issue 60
Originally issued as G10

# Global Journal of Human-Social Science: G
## Linguistics & Education

Volume 19 Issue 10 (Ver. 1.0)

Open Association of Research Society

© Global Journal of Human Social Sciences. 2019.

All rights reserved.

This is a special issue published in version 1.0 of "Global Journal of Human Social Sciences." By Global Journals Inc.

All articles are open access articles distributed under "Global Journal of Human Social Sciences"

Reading License, which permits restricted use. Entire contents are copyright by of "Global Journal of Human Social Sciences" unless otherwise noted on specific articles.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without written permission.

The opinions and statements made in this book are those of the authors concerned. Ultraculture has not verified and neither confirms nor denies any of the foregoing and no warranty or fitness is implied.

Engage with the contents herein at your own risk.

The use of this journal, and the terms and conditions for our providing information, is governed by our Disclaimer, Terms and Conditions and Privacy Policy given on our website http://globaljournals.us/terms-and-condition/menu-id-1463/

By referring / using / reading / any type of association / referencing this journal, this signifies and you acknowledge that you have read them and that you accept and will be bound by the terms thereof.

All information, journals, this journal, activities undertaken, materials, services and our website, terms and conditions, privacy policy, and this journal is subject to change anytime without any prior notice.

**Incorporation No.: 0423089**
**License No.: 42125/022010/1186**
**Registration No.: 430374**
**Import-Export Code: 1109007027**
**Employer Identification Number (EIN):**
**USA Tax ID: 98-0673427**

# Global Journals Inc.

*(A Delaware USA Incorporation with "Good Standing"; **Reg. Number: 0423089**)*

*Sponsors: Open Association of Research Society*
*Open Scientific Standards*

## *Publisher's Headquarters office*

Global Journals® Headquarters
945th Concord Streets,
Framingham Massachusetts Pin: 01701,
United States of America
*USA Toll Free: +001-888-839-7392*
*USA Toll Free Fax: +001-888-839-7392*

## *Offset Typesetting*

Global Journals Incorporated
2nd, Lansdowne, Lansdowne Rd., Croydon-Surrey,
Pin: CR9 2ER, United Kingdom

## *Packaging & Continental Dispatching*

Global Journals Pvt Ltd
E-3130 Sudama Nagar, Near Gopur Square,
Indore, M.P., Pin:452009, India

## *Find a correspondence nodal officer near you*

To find nodal officer of your country, please email us at *local@globaljournals.org*

## *eContacts*

Press Inquiries: *press@globaljournals.org*
Investor Inquiries: *investors@globaljournals.org*
Technical Support: *technology@globaljournals.org*
Media & Releases: *media@globaljournals.org*

## *Pricing (Excluding Air Parcel Charges):*

*Yearly Subscription (Personal & Institutional)*
250 USD (B/W) & 350 USD (Color)

# Editorial Board

## Global Journal of Human-Social Science


### *Dr. Heying Jenny Zhan*

B.A., M.A., Ph.D. Sociology, University of Kansas, USA Department of Sociology Georgia State University, United States

### *Dr. Prasad V Bidarkota*

Ph.D., Department of Economics Florida International University United States

### *Dr. Alis Puteh*

Ph.D. (Edu.Policy) UUM Sintok, Kedah, Malaysia M.Ed (Curr. & Inst.) University of Houston, United States

### *Dr. Bruce Cronin*

B.A., M.A., Ph.D. in Political Science, Columbia University Professor, City College of New York, United States

### *Dr. Hamada Hassanein*

Ph.D, MA in Linguistics, BA & Education in English, Department of English, Faculty of Education, Mansoura University, Mansoura, Egypt

### *Dr. Asuncin Lpez-Varela*

BA, MA (Hons), Ph.D. (Hons) Facultad de Filolog?a. Universidad Complutense Madrid 29040 Madrid Spain

### *Dr. Faisal G. Khamis*

Ph.D in Statistics, Faculty of Economics & Administrative Sciences / AL-Zaytoonah University of Jordan, Jordan

### *Dr. Adrian Armstrong*

BSc Geography, LSE, 1970 Ph.D. Geography (Geomorphology) Kings College London 1980 Ordained Priest, Church of England 1988 Taunton, Somerset, United Kingdom

### *Dr. Gisela Steins*

Ph.D. Psychology, University of Bielefeld, Germany Professor, General and Social Psychology, University of Duisburg-Essen, Germany

### *Dr. Stephen E. Haggerty*

Ph.D. Geology & Geophysics, University of London Associate Professor University of Massachusetts, United States

### *Dr. Helmut Digel*

Ph.D. University of Tbingen, Germany Honorary President of German Athletic Federation (DLV), Germany

### *Dr. Tanyawat Khampa*

Ph.d in Candidate (Social Development), MA. in Social Development, BS. in Sociology and Anthropology, Naresuan University, Thailand

### *Dr. Gomez-Piqueras, Pedro*

Ph.D in Sport Sciences, University Castilla La Mancha, Spain

### *Dr. Mohammed Nasser Al-Suqri*

Ph.D., M.S., B.A in Library and Information Management, Sultan Qaboos University, Oman

### *Dr. Giaime Berti*

Ph.D. School of Economics and Management University of Florence, Italy

### *Dr. Valerie Zawilski*

Associate Professor, Ph.D., University of Toronto MA - Ontario Institute for Studies in Education, Canada

### *Dr. Edward C. Hoang*

Ph.D., Department of Economics, University of Colorado United States

### *Dr. Intakhab Alam Khan*

Ph.D. in Doctorate of Philosophy in Education, King Abdul Aziz University, Saudi Arabia

### *Dr. Kaneko Mamoru*

Ph.D., Tokyo Institute of Technology Structural Engineering Faculty of Political Science and Economics, Waseda University, Tokyo, Japan

### *Dr. Joaquin Linne*

Ph. D in Social Sciences, University of Buenos Aires, Argentina

### *Dr. Hugo Nami*

Ph.D.in Anthropological Sciences, Universidad of Buenos Aires, Argentina, University of Buenos Aires, Argentina

### *Dr. Luisa dall'Acqua*

Ph.D. in Sociology (Decisional Risk sector), Master MU2, College Teacher, in Philosophy (Italy), Edu-Research Group, Zrich/Lugano

### *Dr. Vesna Stankovic Pejnovic*

Ph. D. Philosophy Zagreb, Croatia Rusveltova, Skopje Macedonia

### *Dr. Raymond K. H. Chan*

Ph.D., Sociology, University of Essex, UK Associate Professor City University of Hong Kong, China

### *Dr. Tao Yang*

Ohio State University M.S. Kansas State University B.E. Zhejiang University, China

### *Dr. Periklis Gogas*

Associate Professor Department of Economics, Democritus University of Thrace Ph.D., Department of Economics, University of Calgary, Canada

### *Dr. Rita Mano*

Ph.D. Rand Corporation and University of California, Los Angeles, USA Dep. of Human Services, University of Haifa Israel

### *Dr. Cosimo Magazzino*

Aggregate Professor, Roma Tre University Rome, 00145, Italy

### *Dr. S.R. Adlin Asha Johnson*

Ph.D, M. Phil., M. A., B. A in English Literature, Bharathiar University, Coimbatore, India

### *Dr. Thierry Feuillet*

Ph.D in Geomorphology, Master's Degree in Geomorphology, University of Nantes, France

# Contents of the Issue


i. Copyright Notice
ii. Editorial Board Members
iii. Chief Author and Dean
iv. Contents of the Issue

1. Rationalist Theory in the Postillas de Grammatica Geral of Francisco Sotero dos Reis. *1-21*
2. Empirical Research on Occupational Adaptation of Graduates from Higher Vocational Colleges and Educational Considerations. *23-31*
3. Does the MS Spell Checker Effectively Correct Non-Native English Writers' Errors? A Case Study of Saudi University Students. *33-52*
4. Moral Education through Literature with Special Reference to Novels of DH Lawrence. *53-56*
5. Ready for School? Systematic Review of School Readiness and Later Achievement. *57-71*
6. Behaviorism, Innatism, Cognitivism: Considering the Dominance to Provide Theoretical Underpinning of Language Acquisition Conjecture. *73-79*

v. Fellows
vi. Auxiliary Memberships
vii. Preferred Author Guidelines
viii. Index

Global Journal of human-social science: G
Linguistics & Education
Volume 19 Issue 10 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-460X & Print ISSN: 0975-587X

# Rationalist Theory in the Postillas de Grammatica Geral of Francisco Sotero dos Reis

By Leite, Marli Quadros

*University of São Paulo*

*Abstract-* Our goal in this article is to analyze the Postillas de grammmaticageralapplicada á lingua portugueza pela analyse dos classicos, ouguia para a construcçãoportugueza (Apostilles of General Grammar as Applied to the Portuguese Language Through the Analysis of the Classics, or, a Guide to Portuguese Construction) (1868 [1862]), by Francisco Sotero dos Reis (1800-1871), in order to investigate to what extent the author applies the foundations of the general theory to the exploration and interpretation of excerpts syntax from literary texts of the Portuguese language collected for analysis. We will be working with theory, methods and techniques from the História das IdeiasLinguisticas (History of Linguistic Ideas) (Auroux 2006, 2009; Colombat, Fournier, Puech 2017; Leite 2018), which leads us to treat the grammatical fact selected for analysis as an effect, and as a cause the theory that served the interpretation given by the grammarian to that fact.

*Keywords: philosophical grammar, brazilian philosophical grammar, portuguese language, general theory, traditional theory, retrospective horizons, history of linguistic ideas.*

*GJHSS-G Classification: FOR Code: 339999*




*Strictly as per the compliance and regulations of:*

© 2019. Leite, Marli Quadros. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

# Rationalist Theory in the Postillas de Grammatica Geral of Francisco Sotero dos Reis

Leite, Marli Quadros

*Abstract-* Our goal in this article is to analyze the *Postillas de grammmaticageralapplicada á lingua portugueza pela analyse dos classicos, ouguia para a construcçãoportugueza* (Apostilles of General Grammar as Applied to the Portuguese Language Through the Analysis of the Classics, or, a Guide to Portuguese Construction) (1868 [1862]), by Francisco Sotero dos Reis (1800-1871), in order to investigate to what extent the author applies the foundations of the *general theory* to the exploration and interpretation of excerpts syntax from literary texts of the Portuguese language collected for analysis. We will be working with theory, methods and techniques from the *História das IdeiasLinguisticas* (History of Linguistic Ideas) (Auroux 2006, 2009; Colombat, Fournier, Puech 2017; Leite 2018), which leads us to treat the grammatical fact selected for analysis as an effect, and as a cause the theory that served the interpretation given by the grammarian to that fact. Through an analysis by the grammarian of the *retrospective horizons*(*horizons de rétrospection,* Auroux 2006), we examine the proximity of this work to French texts that promulgated the *general theory*, the *Grammairegénérale et raisonéeonée of Port-Royal* (1660), by Arnauld et Lancelot, and the entries on grammar in the *Encyclopédie* (1754 and 1765), by Du Marsais and Beauzée, as well as the *Grammatica Philosophica da línguaportuguesa* (Philosophical Grammar of the Portuguese Language) (1822) of Jeronymo Soares Barbosa, a Portuguese grammarian who reports to this theory. Our investigations demonstrate that the work of Sotero dos Reis, though connected with the *general theory*, does not develop or practice its principles with precision, for which reason it is more of a traditional work than a general one.

*Keywords: philosophical grammar, brazilian philosophical grammar, portuguese language, general theory, traditional theory, retrospective horizons, history of linguistic ideas.*

## I. Introduction

The advent of philosophical grammar in the Luso-Brazilian world came more than one hundred years after the 1660 publication of the *Grammairegénérale et raisonée de Port Royal* (*GGR*).[1] In Portugal, although some grammarians have announced their affinity since the early XVIIIth century with this French grammatical theory — Argote (1721 e 1725) and Lobato (1770) for example — there was at this time no effective theorizing or application of rationalist theory taking place in their works. The theoretical or practical development of rational and philosophical ideas began to emerge later, in the last quarter of the century. First there was Bacelar (1783), who although a rationalist created his own model of grammar with a more logical and physical basis; then there was Sousa (1804), who conceptualized grammar by means of a "metaphor", an "art of painting" thoughts with words, paraphrasing Beauzée (1757, p. 841b), whom he follows on many points, especially in relation to the theory of verb tenses[2], though he does not develop it completely or theoretically; and Silva (1806), who, although he cites the *Grammaire Générale et Raisonée,* and authors such as Condillac and Du Marsais, does not dedicate himself to theoretical commentary on his grammatical options, though he applies certain aspects of the general theory. Next comes Couto e Melo (1818), whose *retrospective horizons* (Auroux 2006) is found in a number of French authors on philosophical grammar as well as in the encyclopedists Du Marsais and Beauzée, and who, in fact, applies the general theory in his work, carrying on a theoretical debate on his theses to some extent. And finally there is Barbosa (1822), the best-known and most studied Portuguese representative of this theoretical current, who benefited from the assumptions of both the GGR and the Encyclopedists. This is the author who debates the rational theory at length, reinterpreting it and, based on this, creating what is to an extent his own version of the theory, used to describe the Portuguese language (Leite 2018, p. 23-24).[3] This last author consolidated his position as an influence on many philosophical grammarians, both Portuguese and Brazilian, including the grammarian whose work will be examined here.

In Brazil, of course, the emergence of philosophical grammar came somewhat later, perhaps due to the distance between colony and metropolis and the cultural center of Europe— at that time, France.

*Author: Full Professor at Department of Classical and Vernacular Letters, Faculty of Philosophy, Letters and Human Sciences, University of São Paulo (Brazil) and Researcher at Conselho Nacional de Desenvolvimento Científico e Tecnológico– CNPq (National Council for Scientific and Technological Development). e-mail: mqleite@usp.br.*

[1] In France, philosophical grammar existed up until the XXth century although as Fournier says (2013, p. 11), the model was considered "a late development" already in the XIXth Century. In the XXth Century, perhaps, grammars contributing to such a model may be rare given that the author cited mentions only two examples of this type of work in investigating the theory of verb tense.

[2] Cf. Gonçalves (1998).

[3] On rationalist grammar in Portugal read Gonçalves (2006) and Santos (2015).



© 2019 Global Journals

Even so, Antônio da Costa Duarte,[4] in 1829, brings out his *Compendio da grammatica da lingua portugueza,* and then eleven years later, in 1840, publishes a second edition with the title *Compendio da grammaticaphilosophica da lingua portugueza,* clearing the way for the production of works authored in Brazil with ties to the philosophical grammarians,[5] although not very many.[6] What we do know is that it is the philosophical grammar of Duarte that attracts Brazilian followers, or at least which disseminates the philosophical model in the country, having gone through six editions, more than any other such work, and having been distributed outside the state of Maranhão (Cavaliere 2010, Leite 2018a and 2018b).[7] After this work came the *Grammatica portugueza accomodadaaos principiosgeraes da palavra, seguidos de immediadaaplicaçãopratica,* of Francisco Sotero dos Reis (1866), which went through three editions, though only one during the life of the author (Leite 2019, coming soon)[8] and also reached beyond the borders of Maranhão.

Though heavily criticized, philosophical grammar played an important role in a broader theoretical debate on concepts of language, idiom, grammar and related topics, such as discourse, propositions, substantive verbs, speech acts,[9] determination, predicates and others, which were created or reinvented in grammatical terms based on this perspective. The theoretical discussion that emerged from these works clearly conferred a notable conceptual and terminological variety to this debate, stemming from general grammar and especially from the GGR (Arnauld and Lancelot, 1660); the Enlightenment-era *Grammairegénéraleou exposition raisonnée des élémentsnécessaires du langage* (Beauzée 1767); *Principes de grammaire* (Du Marsais 1669); *Course d'études* (Condillac 1775); and the entries of l'*Encyclopédie* (Diderot and D'Alembert 1751-1772), especially the works of Du Marsais (1754) and Beauzée (1765).

In this article we seek to demonstrate the theoretical foundations of which Francisco Sotero dos Reis relies on for the elaboration of his work *Postillas de grammaticageralapplicada á lingua portugueza pela analyse dos classicos, ouguia para a construcçãoportugueza*; our purpose in so doing is to investigate to what extent the expression "general grammar" leads to the application of principles of a general theory to the investigation of syntax, through the analysis of passages from literary texts in Portuguese. The intention is to seek, in order to interpret its concepts, the proximity of this work to, on the one hand, the French texts, — and especially with entries on grammatical topics in the *Encyclopédie*— as well as to a certain extent with the *Grammatica Philosophica* (1822) of Jeronymo Soares Barbosa (1800-1871).

We work here with theories, methods and techniques arising from the *História das Ideias Linguisticas* (Auroux 2006, 2009; Colombat; Fournier; Puech, 2017; Leite 2018), which lead us to identify a *cause-and-effect* relationship between the interpreted linguistic fact, here taken as effect, and its cause, understood as the theoretical interpretation of the fact given by the grammarian to describe it, creating a new element. This procedure demonstrates how in the author's work there are continuities and discontinuities of the linguistic theories available to perform his work. In this case these theories are: (i) the *traditional theory*, that is, the classical Greco-Roman theory, natural basis for all linguistic work, though from time to time it is updated and reinterpreted; and (ii) the *general theory*, especially in the version of French encyclopedists, elaborated by the authors of the entries on grammar of L'*Encyclopédieoudictionnaire raisonné des sciences, arts et métiers.*[10] The *retrospective horizons* is the analytic category that will guide us, allied to the set of dimensions and relations implied in the historical representation (Auroux 2006).

[4] The dates of the author's birth and death are unknown but it is possible to say that he was born in the first quarter of the XIXth Century, bearing in mind that his *Compendio da grammaticaportugueza* was published in 1829, and that he died in the last quarter of the same century since the work had its final edition in 1877, probably during the lifetime of the author since there is no mention of a second author.

[5] The *Epitome de grammatica da lingua portuguesa* of Antonio de Moraes Silva (1806) may be considered the first work of philosophical grammar but there is controversy over this positioning because the author, though Brazilian, lived for a long time outside Brazil, mainly in Portugal, where the work was published.

[6] In a catalogue of Brazilian works on grammar by Polachini (2017), which lists two hundred works (including multiple editions), there appear only six authors of rationalist grammars, based on their use of the terms "philosophical" or "general" in the titles. Among these others is Antonio da Costa Duarte (with six editions of the *Compendio* in 1829, 1840, 1853, 1859, 1862 and 1877) and Francisco Sotero dos Reis, with three editions of the *Postillas* (1862, 1868 [the author does not cite the 3rd edition of 1871]) and three editions of the *Grammaticaportugueza* of 1866, 1871 and 1878 [1 February 1878 is the date recorded in the text of the third edition, entitled "To the Public" and signed "Americo Vespucio dos Reis"].

[7] Bithencourt (1862), in a work published in Rio de Janeiro, refers in his preface to the *Compendio* of Father Antonio da Costa Duarte, if only to formulate criticisms of the work in order to justify the theoretical precision of his own. Silva (1806, p. 99) also refers to Duarte in a discussion of the grammatical rule of the personal pronoun, which both Duarte (1877) and Barbosa (1822) classify as a determinative adjective.

[8] Other Brazilian authors of philosophical grammars as cited by Polachini (2017) are: Bezerra (1861), Bithencourt (1862), Murici (1864) e Carneiro Ribeiro (1881), the works of all of whom appeared in only a single edition.

[9] Beauzée (1765) on the use of verb tenses.

[10] All translations from the French of the *Encyclopédie* were performed by the author of this article.

© 2019 Global Journals

We believe as well that with respect to the grammar of the Portuguese language, the incorporation of a general theory (philosophical and rationalist) created an opportunity to more deeply explore concepts relating to syntax. The work we analyze here, for example, is entirely dedicated to the study of syntax, as we shall see. In order to attain our objective, we will develop the following topics in the course of this article: a presentation of the work under study, by reviewing the chronology of its publication, as well as by discussing its characteristics and organization, in items 1 and 2. In item 3 we analyze the functionality of the *general theory* in the syntactic theory of the author, and finally, in item 4, we examine the syntactic concepts adopted by Sotero dos Reis as they relate to those of the *general theory*.

## II. The *Postillas de Grammaticageral*: Essential Characteristics

Francisco Sotero dos Reis was a journalist, legislator and professor of Latin and literature at the Instituto de Humanidades de São Luiz.[11] Starting in 1861, when the Institute of Humanities was created, its founder and director, Pedro Nunes Leal, began requesting that the professor dedicate himself to producing educational materials for courses in Latin and Portuguese. Sotero dos Reis complied with the request and began passing along to the director the manuscripts he produced for his courses. Thus was born the grammarian Francisco Sotero dos Reis. These manuscripts, as attested by Leal (1873, p. 160), gave rise to the work *Postillas de grammaticageral, applicada á lingua portugueza pela analyze dos classicos, ouguia para a construcçãoportugueza,* [12] which was then published by the printer Bellarmino de Mattos, known at the time as the "Didot of Maranhão" (p. 160-161).

There remains a certain amount of confusion over the history of the publication of the *Postillas* for although Leal stated that the first edition was brought out in 1862, and in the general critical literature this date is accepted, we have gained access to a complete first edition whose title page bears the date 1863.[13] In the description detailing the work in the catalogue, however, the following information appears between brackets: "[San Luiz], [1862]". Perhaps the 1863 edition was a reprint of the first edition of 1862, and critical historiography has yet to learn of any 1863 edition. We append a copy of the title page in question here.

A careful reading of the introduction presented in the 1863 edition permits us to conclude this edition was a reprint of the first edition. Note what the author says here.

> (1) It has its beginnings in certain grammatical *postillas* (course handouts) that we dictated to our students and which at the request of a friend (*) who took it upon himself to print them, we developed them as needed to ready them for printing, convinced that in doing so, we were performing a service for Brazilian youth. It was printed *at the same time as we were composing it* and so it is quite natural that there be errors and lacunae, for which we beg the forgiveness of the benevolent reader.
>
> *(*)*To Mister Pedro Nunes Leal this book is most deservedly dedicated, for were it not for his request it would have never been written. (Sotero dos Reis 1862, p. V.Emphasisours)
>
> Teve origem n'umas postillasgrammaticaes que dictavamos aos nossos alumnos, e á que, por pedido de um amigo (*) que se encarregou da impressão, démos o preciso desenvolvimento para ser impresso, persuadidos de que com isso faziamos tal qual serviço á mocidade brazileira. Foi impresso *á medida que ia sendo por nós composto*; por isso é muito natural que tenha defeitos e lacunas, para os quais pedimos venia ao leitor benevolo.
>
> (*) O Sr. Pedro Nunes Leal a quem por justo motivo dedicamos este livro, pois se não fossem as suas solicitações, não o teriamos composto. (Sotero dos Reis 1862, p. V) (Grifamos)

The edition of 1862 must certainly have been printed in the form of worksheets, printed at the same time in which they were being created, and to which students would have had accessed as each one was printed. This explains why this edition does not exist in any library. In that case, we conclude that the chronology of the work is as follows: in 1862, a first edition printed in chapters; in 1863, a reprint of the first edition printed in a single volume; in 1868, a second edition; and in 1870, a third edition, both revised by the author.[14]

In the 1863 edition there is a part that does not exist in the others, entitled "Juísocritico", signed by TrajanoGalvão de Carvalho (1830-1864), writer (poet) from Maranhão, Bachelor's Degree in Social and Legal Sciences (Blake 1902, p. 318), patron of the Academy of Letters of Maranhão. The first statement of this text confirms that the circulation of the1862 editions was limited because as the author says, "The work now made public with this printing is, if not entirely exceptional, then has very few predecessors in the Brazilian press (…)". This statement attests to the chronology that we have just presented.[15]

Other information set forth in the introduction are important to the understanding of the

[11] For other biographical data on the author see Leal (1873).

[12] Original citations to this work in Portuguese adhere to the spelling of the author.

[13] I obtained a copy of the first edition of this work from the British Library (London) with the help of Elaine Diniz Torres, for whose invaluable assistance I am grateful. All of this was made possible by the contributions of Cínthia Siqueira, currently my doctoral student.

[14] A complete reference of all editions is in the reference list at the end of this article.

[15] Sotero dos Reis 1863, Appendix, p. 1 (Emphasis ours).



© 2019 Global Journals

*Postillas*. The author states for example that the work is not a grammar properly speaking because it covers only a part of that field, namely "construcção" (construction) — that is, in the author's interpretation, syntax. He writes:

> (2) The work we present here is not a grammar, as it covers only part of this topic with respect to general principles governing all languages; it is rather a treatise on Portuguese construction, the first two parts of which serve as a preliminary to the third, or rather, a kind of anatomy of language, confined to this sole objective, and not so complete as we would have liked, but only as far as this small, slim volume allowed. (Sotero dos Reis 1863, p. V.Emphasisours.)
>
> O trabalho que publicamos, não é uma grammatica, pois apenas abrange uma parte della com applicação aos principiosgeraes, reguladores de todas as linguas; mas um tratado da construcçãoportugueza, no qual as duas primeiras partes servem de preliminar á terceira, ou antes uma especie de anatomia da lingua, circumscripta a esse único objeto, não tão completa, como desejáramos fosse, mas só quanto nos comportou este pequeno e acanhado volume. (Sotero dos Reis 1863, p. V. Grifamos.)

Sotero dos Reis does not consider his *Postillas* to be a grammar because it does not pause to examine the minutiae of grammatical categories. Along with this caveat on the character of the work, the grammarian also makes clear in a note that the target audience for the work comprises those already possessing a foundation in metalinguistic knowledge. Here is the note:

> (3) Note 1. For the formation of the singular and plural of substantive nouns and adjectives as well as the inflection of verbs, consult conventional grammars, since our purpose is not to compose a grammar but merely to assist in the analysis of grammatical propositions and periods for beginners who already have the precise knowledge of the parts of the speech. (Sotero dos Reis 1868, p. 13-14. Emphasisours.)
>
> Nota -1.ª Para formação do singular e plural dos nomes substantivos e adjectivos, bem como para as inflexões dos verbos, recorra-se ásgrammaticasordinarias, visto como nosso fim não é compôr uma grammatica, mas auxiliar unicamente, na analyse das proposições e periodosgrammaticaes, aos principiantes que já tiverem o preciso conhecimento das partes da oração. (Sotero dos Reis 1868, p. 13-14. Grifamos.)

The introduction to the *Postillas*is indispensable reading for the analysis and interpretation of the author's ideas, with respect to this work and also to his *Grammaticaportugueza* (1868), the second grammatical work of Sotero, given that he does not cite his sources in the body of the work or pause to engage in theoretical explanations. An overview of this introduction allows the analyst of both works to learn and understand the author's objectives and his foundations, based on explicit references to French texts: the *Grammaire Générale et Raisonnée de Port-Royal* (1660), the work of Arnauld (1612-1694) and Lancelot (1615-1695) and one of the texts of Du Marsais (1675-1756), perhaps *Les véritablesprincipes de la grammaireou nouvelle grammaireraisonnée pour apprendre la langue latine*(1729)and perhaps also — this time in reference to a Portuguese grammarian — the *Grammatica philosophica da lingua portugueza* (1822) of Jeronymo Soares Barbosa (1717-1816), an author with broad influence in Portugal and Brazil as a philosophical grammarian.

On the didactic framework of the work let us recall Leal (1873, p. 160) when he explains that the course in Portuguese was divided into three "classes": one less advanced, for younger students, and two for advanced students with a reasonable level of metalinguistic knowledge, to whom the *Postillas* were addressed. To the less advanced students the grammarian addressed the *Grammaticaportugueza* (1866), four years after his first publication. Francisco Sotero dos Reis was (originally) a teacher of Latin and not of Portuguese, for which reason he is careful to compare the two languages and maintain a distinction between them, stressing idiomatic expressions peculiar to Portuguese (*idiomatism*). During his classes his students took down notes of his explanations and it was these notes that formed the basis of the *Postillas*.

According to Sotero dos Reis, the *Postillas* deal mainly with the syntax of the Portuguese language, because as he believed the subject had not yet been covered by other grammarians; as the grammarian's biographer explains:

> (4) What remained to be done for this course was a grammar, covering mainly syntax as it touches on analysis and construction. Francisco Sotero was lecturing on Latin letters at this secondary school and had a habit of adding explanations of Latin grammatical rules the ways in which Portuguese diverged from Latin. His disciples took notes and in this way the Postillas took shape. (Leal 1873, p. 160)
>
> Faltava para esse curso uma grammatica, principalmente na parte da syntaxe, no que respeitava analyse e construcção. Francisco Sotero leccionava latinidade nesse collegio e tinha por uso junctar á explicação das regras da grammatica latina aquillo em que as da portugueza divergiam d'aquella. Seus discipulos tomavam notas e formavam assim umas como postillas (sic). (Leal 1873, p. 160)

To expound further on the subject, however, Sotero dos Reis (1868, p. 5-23) reviews all the grammatical categories ("parts of the speech" in the author's terminology), which are announced in the introduction using the expression "anatomy of language" as cited in the excerpt (2). The description of these categories however is succinct and serves merely as an introduction to the work on syntax. In the thirteen pages of the first part the grammarian presents the parts of the

© 2019 Global Journals

speech while in the fifteen pages of the second he deals with the concept of the period and briefly presents a typology of subordinate clauses. The commentaries on the characteristics of grammatical categories and their functions appear (in addition to what is found in the first part) directly after the examples or else interspersed among the models of analysis presented, which the author uses to illustrate his lessons. Because the purpose of the grammarian is to explore the syntax of classical texts of the Portuguese language, as well as a description of the parts of the speech based on the *proposition*, the grammarian spends most of his time on the analysis of literary excerpts, from which examines linguistic features, adding commentary on both semantics — the effects on meaning of syntactic structures — and the style of each text (periods and propositions).

The analysis of the *corpus* of Portuguese literature in the XVth, XVIth, XVIIth and XVIIIth Centuries is carried out by applying *traditional theory* combined with certain concepts of the *general theory*, as we will demonstrate in the course of this study. The following are the principal authorswhosetextsserved as a basis for theanalysesofSotero dos Reis: Jacinto Freire (1597-1657), Frei Luiz de Sousa (1555-1632), Father Antonio Vieira (1608-1697), João de Barros (1496-1570), Duarte Nunes de Leão (ca. 1530-1608), Garcia de Resende (1470-1536), Luis Vaz de Camões (1524-1580), Francisco de Morais Cabral (ca. 1500-1572), and Francisco Sá de Miranda (1481-1558).

In the second edition of the *Postillas* the author added a supplement to the fifth section of the work in order to work with earlier (medieval) authors [16] whose texts had not within reach at the time of publication of the first edition. Among these authors are the following: Fernão Lopes (1380-1390), Gomes, Eannes de Zurara (1410-1474), Rui de Pina (1440-1522), Duarte Galvão (1446-1517), Duarte Galvão (1446-1517), and Damião de Góis (1502-1574). [17] There are very few texts by Brazilian authors. Three passages from the works of the Marquis of Maricá are cited and analyzed as well as the poem *Marília de Dirceu* by Tomás Antonio Gonzaga (the latter considered a Luso-Brazilian author, half-Portuguese, half-Brazilian). Literary excerpts — often quite extensive — are used to validate grammatical explanation although in some cases they also serve as counterexamples. The author's technique in relation to the exploration of the literary passages cited as motivation for linguistic explanation, or as an illustration of the theory exposed, is arbitrary. That is, the texts are presented both before and after the metalinguistic explanation in which they are interspersed.

In the following item we will comment on how the different parts of the *Postillas* unfold.

## III. Organization of the Work

This is a work which by reason of its purpose does not follow the typical model of philosophical grammar, which is generally organized into chapters dealing with spelling, pronunciation, etymology, and syntax, though it is connected to the theory on which this model is based because, as stated above, it is a work whose scope is confined to syntax. The table of contents and index immediately reveal that this is a practical work based on a mixture of two theories: the *traditional* and the *general*. In fact, an accurate reading of the content on the subject of grammar clearly reveals that traditional Greco-Roman theory occupies more space than does the *general theory.* This is demonstrated by the use of the terms "construction" and "proposition" and by the tripartite structure that accompanies them (subject, verb and attribute) as well as the meta-term *determiner* to describe adjectives in contradistinction to the traditional definition of these as *qualifiers*. Most terms however are not specific to the general theory.

The *Postillas* are divided into five parts and open with a presentation of the figure of the proposition. Below, in order to provide an overview of the book, we present this summary table of its organization, to be read horizontally left to right.

[16] "Not having had an opportunity to consult, at the time of the first edition of the PostillasGrammaticaes, certain older writers such as Fernão Lopes, Ruy de Pina and others (...)". (Sotero dos Reis, 1868, p. 229.)

[17] Sotero dos Reis places Damião de Góis among the "older writers" in order to cite the "interminable periods" found in his works, citing the *Chronicad'el-rei D. Manoel* (1550/1570?). (Sotero dos Reis, 1868, p. 232).



© 2019 Global Journals

*Table 1:* Organization of the work

| Part One (p. 5 a 24) | Part Two (p. 25-37) |
|---|---|
| The proposition: direct and inverse order.<br>Complements.<br>Invariant parts of speech: prepositions, adverbs and interjections.<br>Variable parts of speech: adjectives (determinative and qualitative).[18]<br>Declension of personal pronouns. Models of analysis (subject, verb and attribute. | The period.<br>Propositions(absolute, subordinate, [circumstantial, complementary]).<br>Models of a series of periods forming a continuous discourse. |
| **Part Three (p. 37-87)** | **part Four (p. 87-136)** |
| Section I<br>Particular characteristics of the Portuguese language with respect to construction and idiomatism.<br>*Inversion of the terms of the proposition*<br>- of the participle;<br>- of the personal infinitive;<br>- of the compound subject;<br>- of the complex subject;<br>- of the interrogative and exclamatory subject.<br><br>Section II-<br>Idiomatism and grammatical difficulties.<br>- Inversion of the terms of the proposition;<br>- Use of the unipersonal verb *haver;*<br>- Use of the indefinite pronoun *SE* as distinct from the reflexive pronoun *SE*;<br>- Use of the verb *SER* in place of the verb *ESTAR*;<br>- special use of the adjective;<br>- Use of the adjunct conjunctive in its neuter and composed form, *O QUE.* | Figures of construction<br>- Principal ellipses (of the subject, of the attribute, of the verb; of the conjunction; of the preposition; of the adverb; of the conjunctive adverb and adjective; and other notable ellipses).<br>- Pleonasm.<br>- Syllepsis.<br>- Hyperbaton. |
| **Part Five (p. 137-229)** | **Supplement to Part Five (p. 229-264) (p. -229-264)** |
| Section 1<br>Structure of the grammatical period:<br>- Placement of complements.<br>Section 2<br>Continuation of the structure of the grammatical period:<br>- Placement of propositions. | [Supplement on Portuguese construction using examples from older writers such as Fernão Lopes and Rui de Pina.] |

[18] There is no reference in the index to the "substantive noun" but in the body of the *Postillas* the grammarian refers to it.



© 2019 Global Journals

The first part presents the concepts and classifications of the grammatical categories and their functions, beginning with an introduction of the concepts of *proposition, subject, attribute, verb and complement*. This beginning signals the assumption of a rationalist position on the part of the author, in terms of the terminology used and in terms of its concepts. In this chapter however, the author harmoniously combines rationalist concepts and principles with traditional concepts and syntactic analysis.

In the second part the author begins an analysis properly speaking of syntax, introducing the principal concepts with which he will be working — the period and the proposition, the basis of which he will approach other syntactic functions. His theorizing on the period, though coinciding on some points with that of the encyclopedists Du Marsais and Beauzée, is not an application of these thinkers but rather a grafting of certain terms and concepts of theirs onto a traditional fabric that predominates. It is worth noting that there is no absolute agreement on certain points of this theory, not even on the part of these two philosophers and grammarians, who are authors as well of the general theory. The basis of the period concept, which Sotero dos Reis (1868, p. 26) also terms *frase total* (the total phrase), which plays no part in the terminology of the general theory, is the meaning, defined as "a perfect and absolute meaning". This is not far from what both French scholars say on the subject of the period, but the division of the period by Sotero dos Reis into simple and compound is not consistent with the teachings of the two thinkers.

The concept of the period in Du Marsais (1754, vol. IV, p. 82b) begins in the context of a presentation and discussion of absolute, or complete, and relative, or partial propositions, in that the latter are chained together to create a meaningful whole. In introducing the term that will designate this whole, the encyclopedist invokes the rhetoricians, saying, "the joining of various related propositions by means of conjunctions or other relational terms is known as a period among the rhetoricians. It will not be pointless to state here what the grammarian must already know." The quotation shows a certain restriction by the French author on the use of the term "period" as imported from domain external to grammar, the rhetoric, but in what serves as a kind of concession Du Marsais admits that the linguistic fact of the conjoining of propositions dedicated to a unit of meaning is also of grammatical interest and so incorporates this term into his own theory.

For both Marsais (1754, vol. IV, p. 82b) and Beauzée (1767, Book III, p. 41) the period is defined as a meaningful whole composed of propositions linked by conjunctions. Du Marsais (ibid) states that "the period is a conjunction of propositions tied together by conjunctions and that taken together they form a finite whole: this finite meaning is also termed a complete meaning." Beauzée takes a position on this topic that agrees with that of Du Marsais,[19] although he goes a little further in the definition he formulates for the period. He says that the period is a whole comprising "a complete and finite meaning made up of propositions that play no part in one another but which are linked in such a way that some necessarily presuppose the others in the fullness of the total meaning." As to the classification of periods, Beauzée does not merely take into account the number of propositions of which they are composed, but also, in an interpretation somewhat more complex, considers that they are made up of *members*, which are in turn composed of propositions. To this end the French grammarian states that a member may, for example, have three "submembers" because it comprises three propositions (Id. p.42).

Beauzée (1767, p. 40), again on the study of the period, complains of the reference by Du Marsais to the rhetoricians,[20] for according to him, it would be "useless to the grammarian to speak of the period to the rhetoricians" but he does not clarify the reasons for this position. It may be possible to admit that while the rhetoricians deal with finding means to impart greater persuasive force to the statement, the rationalist grammarian studies language in search of the logic used by the speaker to express his thought and in so doing to create meaning through articulated speech. The difference between these two types of period, then, would have to do with the complexity of the analysis that the rhetorical period might require but not with the theory used to carry it out.

The reference here to this debate makes sense because Sotero dos Reis (1868, p. 26) not only refers to the rhetoricians and the "rhetorical period" but also deals with a classification of periods in which he examines both the grammatical period and the rhetorical period, the latter being more complex than the former. In the former case, he says, each verb corresponds to a proposition while in the latter this is not the case since every period has another order because it is more concerned with the "harmony of pauses and contrasts" and less concerned, as we may infer, with grammar. For this reason, the Brazilian grammarian says, in the case of the rhetorical period one cannot speak of propositions but rather of members, made up of more than one grammatical proposition. On these grounds he presents a theory in which relative and incidental (explanatory and restrictive) and infinitive, propositions, together with those on which they depend, constitute

[19] Beauzée, however, (1767, pp. 35-41) disagrees with Du Marsais (1754, p. 82b-83) on certain aspects of the theory of the period, such as relative propositions, which Du Marsais also terms "correlative".

[20] Du Marsais (1754, p. 82b) says: "The whole of different propositions conjoined among themselves by conjunctions or other relational terms is called a *period* by the rhetoricians".



© 2019 Global Journals

members that make up the rhetorical period. On the other, the grammatical period, our author says, is composed of clauses classified as absolute or subordinate.

The term "member" as applied to the rhetorical period in this context is not the same concept used by Beauzée (1767, Book III, p. 42) in regard to the proposition, for the encyclopedist does not view the period in the same way that the rhetoricians and many grammarians do, as for example Sotero dos Reis. For this encyclopedist a collection of united propositions which, however, maintain their own syntactic and semantic unity, in which one proposition does not depend on another and none are linked by conjunctions, does not constitute a period, and the propositions are termed "separate" (*propositions detachées*). In this case, there may be only one or perhaps a collection of many separate propositions, termed "simple", "composite", "noncomplex", or "complex" as the case may be. The encyclopedist likewise views the integration of a principal proposition with an incident one as a case of "separate" propositions because, as he explains, the incident is an integral part of the principal which stems from a purely semantic criterion, given that the conjunctive element is "relative" to an antecedent term from another clause. In essence, as we can see, this occurs because it is the logico-semantic criterion that controls interpretation, more so than the syntactic clarity displayed by the materiality of the statement. The term "period" is therefore reserved for a complex of propositions "united by conjunctions" and forming a meaningful whole. The definition as expressed by the French author is the following:

> (5) The period then is the expression of a complete and finite meaning by means of numerous propositions that are not integral parts of one another but which are so connected to one another that some necessarily presuppose the others in the fullness of meaning. (Beauzée 1767, Book III, p. 42)
>
> Um período é, então, a expressão de um sentido completo e finito, por meio de muitas proposições que não são partes integrantes umas das outras, mas que são tão conectadas umas às outras que umas supõem necessariamente as outras para a plenitude do sentido total.Beauzée (1767, Livro III, p. 42)

Perhaps it is this conjunction of propositions we understand today in relation to the traditional rules of syntactic analysis for Brazilian Portuguese, which in grammatical nomenclature is termed a "period composed of coordinated clauses".

The fourth part results from the author's comparative study of the rules of Latin and Portuguese, as referred to above, citing Leal (1873). From this stem the idiomatic expressions (idiomatisms), presented simultaneously as characteristics of and a source of difficulties for the grammatical analysis of Portuguese. Regarding this part of the work we should at least comment on the issue of the impersonal usage of the verb *haver*, termed *unipessoal* (unipersonal) by the author. The interpretation of the grammarian in this case is reached by means of a principle of the general theory according to which there exists no verb without its nominative component, for which reason Sotero dos Reis attributes an implied subject and an expressed complement to the unipersonal verb. Thus, he says:

> (6) The unipersonal verb *haver*, whose meaning is the same as that of *existir*, is normally used with an implied grammatical subject, "class, genus, species, portion, quantity, number, time, space", along with an express complement to this subject, preceded by a preposition "de" which is also implied. (Sotero dos Reis 1868, p. 58)
>
> O verbo unipessoal, *haver*, cuja significação é a mesma de *existir*, emprega-se ordinariamente com o sujeito grammaticalocculto, "*classe, genero, especie, porção, quantidade, numero, tempo, espaço &*" e um complemento expresso desse sujeito precedido da preposição, de, tambemocculta. (Sotero dos Reis 1868, p. 58)

The issue of the impersonal verb *haver* has always been difficult for the grammarians to interpret. Barbosa (1822, pp. 176 and 383), also suggests that there is an elliptical subject represented by the pronoun *alguns* ("there are men", or rather "there are some men") or that there is in this case a syllepsis of number, with a verb in the singular and the subject in the plural. Duarte (1877, p. 111), for his part, after reviewing some of the possibilities for the analysis of the case and after a final citation of Lobato (1770) sums up and concludes the discussion in an unusual matter, as we see in the excerpt below.

> (7) Lobato says that in such expressions there occurs ellipsis, such as in the sentence *hámuitoshomens que amão as ciências* (there are many men who love the sciences). In view of so many opinions, each one chooses that which pleases him most (Duarte,1877, p. 111.Boldemphasisours.)
>
> Lobato diz, que em taes expressões ha Ellipse, como :*Ha muitos homens, que amão as sciencias*, isto é, Ha numerode pessoas, que são muitos homens, que amão as sciencias. Á vistade tantos pareceres, cada qual escolha o de que mais gostar.(Duarte 1877, p. 111. O negrito é nosso.)

The fifth part is dedicated to the structure of the grammatical period through an analysis of the positioning of both propositions and complements. In this chapter the author analyzes a number of passages and texts in both poetry and prose in order, on one hand, to show how the period is organized and, on the other, to verify how this structural order has changed over time, exploring texts from different eras. The excerpts to be analyzed are presented by the author all at once, before analysis begins: there are twenty-five texts in the first section, to be used for the analysis of



© 2019 Global Journals

complements, and twenty-six in the second part, for the analysis of the placement of propositions. For the exploration of the examples in the second section the grammarian formulates rules for the insertion of absolute, circumstantial and complementary propositions, based on which he elaborates his commentaries. On absolute propositions, for example, he says

> (8) Absolute propositions joined together by conjunctions of the first kind, or by the identity of the subject, or by the natural order, generation and succession of ideas, should be inserted in the period, which includes more than one, either successively, as when subordinate propositions do not occur among them, or on the contrary, separately, each with its respective dependencies. (Sotero dos Reis 1868, p. 179)
>
> As proposições absolutas approximadas por conjuncções de primeira classe, ou pela identidade de sujeito, ou pela ordem, geração e successão natural das idéas, devem ser collocadas no periodo, que comprehende mais de uma, ou successivamente, quando entre ellas se não mettem de permeio proposições subordinadas, ou, no caso contrario, separadamente, cada uma com as suas respectivas dependencias. (Sotero dos Reis 1868, p. 179)

The syntactic analyses of the grammarian are superficial in that they provide only a classification of propositions together with vague comments on the "poetic effect" that this order of elements and the figures of construction contribute to the text. As an example of this, we transcribe part of an analysis of a strophe from the poem *The Lusiads* by Camões, from the episode of Ines de Castro:

> (9) "Estavas, linda Ignez, posta em socego,
> De teus annos colhendo o doce fruto,
> N'aquelle engano da alma, ledo e cego,
> Que a fortuna não deixa durar muito;
> Nos saúdosos campos do Mondego,
> De teus formosos olhos nunca enxuto,
> Aos montes ensinando e áshervinhas
> O nome, que no peito escripto tinhas." (Camões)[21]
>
> The first passage by Camões is a period composed by three grammatical propositions, one absolute and two subordinates, all of them natural and inserted in succession.
>
> [In] the absolute proposition *Estavaslinda Inez* (...) the noun is the principal element; the subject *tu* of which *lindaIgnez* is the complement, remains implied, and the complement is in inverse order.
>
> Of the two subordinate propositions, the first, *Que a fortunanãodeixadurarmuito*, is a circumstantial restrictive accident, linked to the principal proposition by the conjunctive adjective *que;* the second, *que no peitoescriptotinhas,* is another circumstantial restrictive accident, also linked to the principal by the conjunctive adjective *que.* Both relate to the attribute of the proposition, which they modify, and are expressed in normal word order.
>
> In this period an admirable poetic effect is produced, through the harmonious composition of the propositions and the complements, throughthe judicious choice of the epithets *lindo* and *doce* and*cego* and *saudosa* and *formosos*, which serve perfectly to the coloring of the passage, both through the creation of images through the appropriate use of tropes, all of them powerfully expressed, and the delicacy and tenderness of the conceit, expressed in melodious verses, and in sum through the perfect contrast of its ideas, which convey this and the three stanzas that follow, along with all the others of the episode. From all the artifice used by the poet there results an exquisite, extremely beautiful and deeply moving portrait that touches our spirit deeply. (Sotero dos Reis 1868, pp. 174 and 200)
>
> A primeira passagem de Camões é um periodo composto de tres proposições grammaticais, uma absoluta, e duas subordinadas, todas natural e sucessivamente collocadas.
>
> A proposição absoluta, *Estavas linda Inez* (...) *o nome*, é a principal; tem occulto o sujeito, *tu*, de que é complemento, *linda Ignez*; e está na ordem inversa.
>
> Das duas proposições subordinadas, a primeira, *Que a fortuna não deixadurar muito*, é uma circumstancial incidente restrictiva, ligada á principal pelo adjectivoconjunctivo, *que*; a segunda, *que no peito escripto tinhas*, é outra circumstancial incidente restrictiva, ligada tambem á principal pelo adjectivoconjunctivo, *que*. Ambas ellascahem sobre o attributo da proposição, que modificão, e estão na ordem directa.
>
> Neste periodo é admiravel o effeitopoetico produzido, seja pela harmoniosa collocação das proposições e dos complementos, seja pela ajustada escolha dos epithetos, *linda, doce, ledo, cego, saúdosos, formosos*, que servem optimamente ao colorido, formando imagens, seja pelo apropriado emprego dos tropos, que todos teem virtude, seja pelo delicado e terno do conceito, expresso em versos maviosissimos, seja emfim pelo perfeito contraste de idéas, que apresentão esta e as tres seguintes estancias com todas as mais do episodio. De todo esse artificio empregado pelo poeta resulta um primoroso, bellissimo e pathetico quadro, que nos impressiona profundamente o espirito. (Sotero dos Reis 1868, p. 174 e 200)

As we can see the analyses of the Brazilian grammarian and those the French authors might have produced of the same "period" would not have been the same; there would not even have been any convergence between the two encyclopedists taken separately. If we compare this analysis by Sotero dos

[21] "He placed thee,fair Ignèz! Insoft retreat,
Cullingthefirst-fruits of thy sweet young years,
in thatdelicious Dream, that dear Deceit,
whose long endurance Fortune hates and fears:
Hardby Mondego's yearned-for meads thyseat,
wherelinger, flowing still, those lovely tears,
until each hill-born tree and shrub confest,
the name of Him deep writ within thy breast."
(Burton 1880, p. 127. The Lusiads, canto III, 120)



© 2019 Global Journals

Reis with Beauzée's model, for example, in the first place the term "subordinate propositions" would not be used and in the second the two propositions would be considered "separated" and not mutually dependent, for it would be held that the elements of the two propositions are relative to preceding terms with which they maintain a unity of meaning, complete and independent, and thus are separate.

In other analyses, observance of the rules as presented leads the grammarian to evaluate the texts as he does in this case, in which he takes a positive view, though he may evaluate others negatively if he believes that their complements are not well-composed and for that reason do not adhere to "good grammatical logic". As for the texts to be analysed, Sotero dos Reis will go so far as to rewrite those he considers defective. An example of this approach may be seen in the following passage in which the grammarian analyzes a strophe from the poem *Marilia de Dirceu* by Tomás Antônio Gonzaga:

(10) Eu, Marillia, não sou algum vaqueiro,
Que viva de guardar alheio gado,
De tosco trato, de expressões grosseiro,
Dos frios gelos, e dos sóes queimado.
Tenho proprio casal, e nelle assisto;
Da-me vinho, legume, fruta, azeite;
Das brancas ovelhinhas tiro o leite,
E mais as finas lãas, de que me visto.
(Gonzaga) (Sotero dos Reis 1868, p. 174)

This passage from Gonzaga is a period comprising eight grammatical propositions, six of them absolute (including an ellipsis) and two subordinates, all of which natural and successively set forthand rendered in correct order. (...)

Of the two subordinate propositions, the first, *Que viva de guardaralheiogado*, is a restrictive circumstantial incident that modifies the attribute of the principal and is connected to it by the conjunctive adjective *que*; while the second, *de que me visto* is an incident and restrictive circumstantial modifying the sixth absolute proposition and is also connected to it by the conjunctive adjective *que.*

This period is defective in its structure because the absolute proposition "Da-me vinho, legumes, fruta, azeite" is not placed beside the principal proposition but rather beside the third absolute, *Tenho proprio casal*, without however being dependent on it, as the correct expression of thought demands, and it remains there as though grafted, like an absolute incident that should be positioned between parentheses.

Here is what good grammatical logic demands:

*Eu Marilia, não sou algum vaqueiro, que viva de guardar alheio gado, de tosco trato , de expressões grosseiro, dos frios gelos e dos sóes queimado; tenho proprio casal, no qual, ou onde assisto, e que me dá vinho, legumes fruta, azeite; das brancas ovelhinas tiro o leite, o mais as finas lãas, de que me visto.* (Sotero dos Reis 1868, p. 197)

A passagem de Gonzaga é um periodo composto de oito proposições grammaticaes, seis absolutas inclusive uma elliptica incidente, e duas subordinadas, as quaes todas se achão natural e successivamentecollocadas, e postas na ordem directa. (...)

(...)

Das duas proposições subordinadas, a primeira; *Que viva de guardar alheio gado*, é uma circumstancial incidente restrictiva, que cahe sobre o attributo da principal, e liga-se á ellapelloadjectivoconjunctivo, que; a segunda, *de que me visto*, é uma circumstancial incidente restrictiva, que cahe sobre o attributo da sexta proposição absoluta, e liga-se também á ella pelo adjectivoconjunctivo, *que*.

Este periodo é defeituoso em sua estructura, por que a proposição absoluta *Da-me vinho, legumes, fruta, azeite*, não se aproxima á principal, mas á terceira absoluta, *Tenho proprio casal*, sem que todavia seja uma dependenciadella, como requeria a boa expressão do pensamento, e fica assim sendo um verdadeiro enxerto, ou uma absoluta incidente, que devia ser collocada entre parentehesis.

Eis o que exigia a boa logica grammatical.(Sotero dos Reis 1868, p. 197)

Above all the operation to which Sotero dos Reis subjects the text changes the style of its composition when he transforms it from poetry to prose, which is not a correct method of analysis because the logic of production and reception of each of these genres is distinct. Furthermore, this operation is wholly unproductive with respect to the understanding of the text because there has been no change in the "construction", that is, in the order of the elements, which theoretically might render the text illegible. The intervention the author carries out on this strophe is strictly grammatical in scope, with the substitution of the conjunction *e* for *no qual, ouonde* and then the transformation of an absolute proposition (termed *principal*) into the subordinate *eque me dá*, inverting, with the insertion of the relative pronoun *que*, the transformation of the original enclitic construction into a proclitic one in order to comply with "good grammatical logic".

In the following section we will return to these topics in exploring indicators of the proximity of Sotero dos Reis to the general theory.

## IV. What is there in the *Postillas* that is "General"?

The connection with the general theory in the *Postillas* is visible in the reference to the logico-philosophical principle of the general theory, that of the relation thought/language and mainly due to the incorporation of its principal logical concept: proposition. It is through the proposition that human beings reveal the logico-cognitive operation through which they construct their representation of things and ideas. This implies a "perceiving or conceiving" of something in reality, or in the spirit,



© 2019 Global Journals

followed by an "evaluation" of what has been conceived and finally a judgment of what has been perceived and evaluated and an enunciation of it by means of the proposition. The "proposition" encompasses this entire process, within this theoretical context, because it is the proposition that materially represents an abstract content of thought found generally in all languages and is manifest through a tripartite structure composed of a subject, a copula or substantive verb and an attribute.

The first part of the *Postillas* therefore begin with the proposition, based on which the author presents the syntactic functions of which it is composed: the subject, a function performed by the noun (substantive, pronoun, clause); the attribute, performed by "the adjective or an equivalent"; the copula, performed by the verb; and the complement, carried out by a word or phrase that completes the subject or attribute. In this manner the work opens with a lesson on the proposition in which the author presents the syntactic functions which compose it.

> (11) The proposition, also termed clause, phrase, sentence is the statement of a judgment. Every collection of words that create meaning is a proposition containing the three terms subject, verb and attribute. Example: "God is just", where "God" is the subject, "is" the verb and "just" the attribute. (Sotero dos Reis 1868, p. 5)
>
> A proposição, que também se chama oração, *phrase*, sentença, é o enunciado do juizo. Toda a reunião de palavras, a qual forma sentido, é uma proposição que contem os tres termos, sujeito, verbo, attributo. Exp.: «Deus é justo.» Deus sujeito, é verbo, justo attributo. (Reis 1868, p. 5)

In this brief excerpt Sotero dos Reis makes explicit his commitment to the general theory. We observe that the grammarian, without theorizing, refers to the statement as "juizo" or "judgment" and commits to the development of a syntax based on the concept of the proposition in order to describe its three elements, the subject, the verb, and the attribute. This definition is quite close to the French term *construction* used by Du Marsais(1754, vol. IV, p. 73a-92b) with respect to the concept of the proposition as "the statement of a judgment", for as the French thinker says:

> (12) The proposition is a collection of words which, through the joining of the various relations they possess among themselves, express a judgment or some particular consideration of the spirit, which views some object as such. (1754, vol. IV, p. 81a)
>
> A proposição é uma reunião de palavras que, pelo concurso de diferentes relações que elas têm entre si, enunciam um julgamento ou qualquer consideração particular do espírito, que vê um objeto como tal. (1754, vol. IV, p. 81a)

Du Marsais however does not refer to the term "clause" as a synonym of "proposition" and does not employ the term "sentence". As to the term "phrase", although it is used many times in the entry on "construction" to which we referred, he makes it clear that it cannot be understood as synonymous with "proposition" because the term "phrase" may refer to statements with various structures and incomplete meanings. The French scholar explains the concept of the phrase as follows:

> (13) It will not be futile to observe that propositions and statements are sometimes called phrases: *but phrase is a generic term used for any union of words related to one another, whether forming a finished meaning or a merely incomplete one*. (Du Marsais, 1754, p. 81) (Emphasisours)
>
> Não será inútil observar que as proposições e os enunciados são algumas vezes chamados frase: *mas frase é uma palavra genérica que é usada para qualquer conjunto de palavras relacionadas entre si, tanto se elas fazem um sentido acabado quanto se apenas incompleto*. (Du Marsais 1754, p. 81) (Grifamos)

For the French grammarian the proposition not only represents a "judgment" but also has a binary structure, fixed and stable, and not a tripartite structure as asserted in the GGR and adopted by Sotero dos Reis. For Du Marsais (Ib.), the proposition comprises a subject and an attribute, with the verb included in the attribute. Beauzée (1757, p. 864), however, reinterpreting the concept of Du Marsais, detaches the verb from the attribute and (re)presents the proposition as a tripartite structure comprising the subject, verb, and attribute, and states: "First, the material of the proposition is the totality of the parts which enter into its composition, and these parts are of two kinds, logical and grammatical." This division is not identical to that found in the GGR because the authors of the latter believe the verb to be the element that establishes the connection of subject to object and that it signifies affirmation. Beauzée contests this, a topic to which we will return later on.

Although the work we have examined here is dedicated to the analysis of Portuguese syntax and is a tributary of the general theory, its author does not embrace the bipartite division of this level of analysis into construction and syntax, as does Du Marsais. The term "syntax" does not occur in the *Postillas* in the sense given to it by Du Marsais; and no other is used to take its place because the author does not define as "syntax" the type of analysis applied to the proposition.[22] The term "construcção" (construction) in turn also goes undefined. However, the context of its use clearly indicates that the author refers both to the order or disposition of the elements of the speech and their mutual relations. This is different from the theory of construction proposed by Du Marsais, who explains:

[22] Sotero dos Reis uses the term "syntax" on only three occasions. On one such occasion he speaks of a "rule of syntax", referring to syllepsis (p. 127) and on two others writes of the "syntax of propositions" (pp. 13, 32).



© 2019 Global Journals

(14) CONSTRUCTION: the arrangement of words in discourse. Construction is flawed when the words in a phrase are not arranged according to the usage of a given language. We say that a construction is Greek or Latin when the words are arranged in an order conforming to the use, according the genius of the Greek language or that of the Latin. (Du Marsais, ArticleCONSTRUCTION, 1754, vol. IV, p. 82, 73a-92b)

CONSTRUÇÃO: o arranjo de palavras no discurso. A construção é viciosa quando as palavras de uma frase não são arranjadas segundo o uso de uma língua. Dizemos que uma construção é grega ou latina, quando as palavras são dispostas em uma ordem conforme o uso, de acordo com o gênio da língua grega, ou, com aquele da língua latina. (Du Marsais, Article CONSTRUCTION, 1754, vol. IV, p. 73a-92b)

In his first use of the term, the Brazilian grammarian introduces it in the following context (Sotero dos Reis 1868, p. 37): "The inversion of the terms of the proposition is so frequent in the Portuguese language that it is common to find in the works of classical authors more examples of inverse word order than of natural word order (...).". This seems to suggest that this author arrived at the same conclusions as the French author, but this is not confirmed by the development of the *Postillas*: the Brazilian grammarian broadens the scope of "construction" to the relations and functions of the elements of the proposition as well as to the relations of propositions among themselves, that is, to "the arrangement of words in discourse", to the order, direct and inverse, of words in the sentence, without distinguishing from issues of agreement, definiteness, complementarity, and the positioning of words in the proposition. The beliefs of Du Marsais, however, are different, as we have seen, and are made crystal clear in the following passage:

(15) I believe that construction should not be confused with syntax. Construction merely presents a notion of combination and arrangement (...) But that which brings it about, in every language, that words may excite the meaning desired to be provoked in the spirit of those who know the language, is what we call syntax. Syntax then is the part of grammar that furnishes the knowledge of the established signs of a language in order to stimulate meaning in the spirit. These signs, when we understand their purpose, reveal the successive relations that words have among themselves. It is for this reason that when a person who speaks or writes departs from this order by means of transpositions authorized by usage, the spirit of he who listens or reads meanwhile reestablishes order in virtue of the signs through which we speak, the intention of which it [the spirit] recognizes from usage. Du Marsais (1754, Volume IV, 73a)

Eu creio que a construção não deva ser confundida com sintaxe. Construção apresenta apenas a ideia de combinação e arranjo. (...) Mas o que faz que, em cada língua, que as palavras excitem o sentido que se quer provocar no espírito daqueles que sabem a língua, é o que chamamos sintaxe. A sintaxe é, portanto, a parte da Gramática que dá o conhecimento dos signos estabelecidos em uma língua para estimular o sentido no espírito. Esses sinais, quando conhecemos seu destino, revelam as relações sucessivas que as palavras têm entre si. É por isso que, quando a pessoa que fala ou escreve se desvia dessa ordem por transposições que o uso autoriza, o espírito de quem ouve ou lê restabelece, no entanto, tudo na ordem em virtude dos signos pelos quais falamos, a qual ele [o espírito] conhece a destinação pelo uso. Du Marsais (1754, volume IV, 73a)

Another indicator of the connection between Sotero dos Reis and the general theory is the assumption of the verb *ser* as a substantive verb responsible for the structuring of the proposition. This is the strongest sign of the theory of the fathers of Port Royal, who argue that all judgment is uttered by means of an affirmation (semantic relation), expressed by a proposition in which the subject is connected to an attribute by the substantive verb, the only one possible to enunciating the essence of reasoning. The grammarian from Maranhão, however, accepts only partially the thesis of the authors of the GGR and that of Beauzée as well (1765, p. 48a). For the authors of the GGR the substantive verb is a copulative element and an element of the affirmation of the attribute in the subject, while for the encyclopedist the verb is "a word that presents to the spirit an indeterminate being designated only by the general idea of *existence under a relation with a modification*" (Emphasis ours). For Sotero dos Reis, then, the definition of the verb comprises two key terms: *affirmation*, characteristic of the GGR, and *existence*, a sign of the theory of Beauzée, as we see in the following excerpt.

(16) The verb that *affirms the existence* of the attribute in the subject is the verb *ser* (to be), which is known as the substantive verb because it subsists by itself. (Sotero dos Reis 1868, p. 5.Emphasisours)

O verbo que *affirma a existência* do attributo no sujeito, é o verbo *Ser*, o qual se chama verbo substantivo, porque subsiste por si só. (Reis 1868, p. 5) (Grifamos)

This definition of the verb as a term which "affirms the existence of the attribute" suggests that according to the formulation in which the substantive "existence" appears, Sotero dos Reis may have known of Beauzée's criticisms regarding the definition of the verb as an "affirmation", a concept taken directly from the GGR. Soterodos Reis then formulates his own concept by fusing these: the concept taken from the GGR and the concept of the two French scholars. Even so, the definition of Sotero dos Reis does not correspond to what Beauzée says on this topic. Beauzée discusses the modification the verb produces in the mind of the hearer by means of a proposition given that it is present in all of these and says that which is enunciated by means of the verb is the result of our judgments, through a movement of the intellect.



© 2019 Global Journals

On his divergence with Du Marsais, his predecessor in the composition of items on grammar for the *Encyclopédie*, the philosopher has this to say:

> (17) I would add that it is this idea of intellectual existence which the author of the general grammar glimpsed in the common meaning of all verbs, and which is proper to this species alone, when, after noting all the defects of the definitions formulated before his, he settled on the idea of affirmation. He felt that the nature of the verb ought to be made necessary to the proposition; he did not perceive clearly the idea of *intellectual existence* because he never turned to the nature of inward judgments; he limited himself to the affirmation because he dealt only with the proposition as such. (Beauzée 1765, vol. VII, p. 50. Emphasisours)
>
> Acrescento que é essa ideia de existência intelectual, que o autor da gramática geral entreviu no significado comum a todos os verbos, e próprio apenas a essa espécie, quando, depois de ter notado todos os defeitos das definições dadas antes dele, se fixou na ideia de afirmação. Ele sentiu que a natureza do verbo deveria torná-lo necessário para a proposição; não enxergou com clareza a ideia de *existência intelectual*, porque não voltou à natureza do julgamento interior; ele se limitou à afirmação, porque cuidou apenas da proposição em si. (Beauzée 1765, vol. VII, p. 50) (Grifamos)

Beauzée understood that the authors of GGR, and du Marsais as well, in observing merely one accidental characteristic of the verb, lost sight of the essential because they paid more attention to the more superficial aspects of the proposition and not its deeper meaning, the intellectual operation and the action (modification) the proposition performs by means of the statement of its formulator and also of all who come into contact with. This is the sense of the "intellectual existence" that is the essential property of the verb in the view of Beauzée.

In the definition formulated by the Brazilian grammarian, as we saw, "affirms existence", the two key terms "(affirmation" for the authors of the GGR[23] and Du Marsais an "existence" for Beauzée) appear as complementary although originally they stem from different contexts. "Affirms existence" continues to indicate the connection between subject and attribute as explained in Note (16). There is nothing in the conception of Sotero dos Reis to indicate, then, that the term "existence" as he employs it has anything to do with "intellectual existence" as it was used by Beauzée.

It is important that we recover what was said on this topic by Barbosa (1822, p. 193), an author who may belong to a *retrospective horizons* closer to that of Sotero dos Reis and who may have been the direct source of the idea of combining the concept of existence and the concept of the verb. The issue is more complex, however, because at the same time as Barbosa embraces the idea that the verb represents existence he denies that it is an affirmation.

> (18) All of what was said above, is not properly speaking in accord with anything beyond our substantive verb *ser*, termed "substantive" because this verb alone expresses the existence of a quality or attribute in the subject of the proposition. (Barbosa 1822, pp. 192)
>
> The essence of the verb *Ser* does not consist in Affirmation, as many Grammarians claim. Its infinitive form, which is the primitive one, affirms nothing.Barbosa (1822, p. 193. Emphasisours)
>
> Tudo, o que acima fica dicto, não convem propriamente se não ao nosso verbo substantivo *Ser*, assim chamado, porque ellesohe quem *exprime a existencia de huma qualidade, ou attributo no sujeito da proposição*. Barbosa (1822, p. 192)
>
> A essencia do verbo Ser *não consiste na Affirmação*, como muitos Grammaticospertendem. Sua fórma infinitiva, que he a primitiva, nada affirma. Barbosa (1822, p. 193) (Grifos nossos)

As we see from the passages transcribed here, the substitution of the term "affirmation" by "existence" does little to change the meaning of what the statement has already said in its origin in the GGR, in that the definition "affirms the attribute of the subject" corresponds to the interpretation that the attribute exists in the subject. We conclude that the ambiguity of the meaning of these terms persists, for in the first case affirmation may be understood in broader terms as an "essential relation" between subject and attribute, and in the second case, and by the same token, "existence" signifies not just presence but essence. The use of the term "existence" is a clear sign that the *retrospective horizons* of Barbosa is Beauzée but that the Portuguese grammarian either did not find the theory of the French philosopher useful or else did not understand it.[24]

Unlike his interpretation of the theory of the GGR as well as that of Du Marsais, according to which *ser* is the only verb, Sotero dos Reis, considering the characteristics of the Portuguese language, similar as it is to other Latin languages though different from French, conceives of the verb *estar* as a substantive as well. As we read:

> (19) "Ser", which is the same as "ser ente", a substantive or self-subsisting verb and a nexus or copula that joins the object to the attribute, as such uniquely expresses affirmation or the existence of the quality in the substance,
>
> "Estar", which is the same as "ser estante", an attributive verb in its Latin origin, is a combination of the substantive verb with the idea of abiding, of an attitude, posture, state

[23] The verb "is a word whose principal use is to signify affirmation". Further down, the authors write: "The connection between these two terms (subject and attribute) is properly speaking the action of our spirit that affirms the attribute *of the* subject". (Arnauld; Lancelot 1810, pp. 325, 326.Emphasis ours)

[24] This approach was used by Antônio da Costa Duarte beginning at the earliest with the 4th edition of his *Compendio da grammatica da lingua portugueza* (1859). (cf. Leite 2018).



© 2019 Global Journals

> or idea of existence, combined with that of a vagueness of mood.
>
> This is the difference between the two verbs in languages which, like Portuguese, Spanish and Italian, possess both forms. (Reis 1868, p. 71)
>
> *Ser*, o mesmo que *ser ente*, verbo substantivo, ou subsistente por si só, nexo ou copula que une o attributo ao sujeito, exprime como tal unicamente a affirmação, ou a existência da qualidade na substancia.
>
> *Estar*, o mesmo que *ser estante*, verbo attributtivo em sua origem latina, já é o verbo substantivo combinado com a idea de estada, attitude, postura, estado, ou a idea de existencia combinada com a de modo vaga.
>
> Daqui a differença entre os dois verbos nas linguas que, como o Portuguez, o Hespanhol, e o Italiano, os possuem ambos. (Reis, 1868, p. 71)

We may observe here that the reference to and conceptualization of the verbs *ser*, a substantive, and *estar*, an attributive with a substantive function, are not merely theoretical. Sotero dos Reis finds support for his theory[25] in Portuguese literary texts, for example:

> (20)Mas indo assi, por certo,
> Foi c'um barco n'agua dar.
> Que estava amarrado á terra,
> E seu dono era (estava) a folgar. (Bernadim Ribeiro)
>
> Erão (estavão) já nesse tempo meus irmãos
> Vencidos e em miseria extrema postos; (...)'. (Camões)
> (In: Sotero dos Reis 1868, p. 69)

In this quotation, the verbs in parentheses are additions by Sotero dos Reis, indicating that the verb *ser* is used in place of *estar* by the authors. Thus, the practice of literary language confirms the thesis that in Portuguese the verb *estar* is also substantive.

Another significant characteristic of general grammar is the hypothesis that the statement may on a superficial syntactic level be incomplete, although its semantic completeness is not, because it is recovered at a deeper level (the level of interpretation); that is, the incomplete linguistic form is related to a complete meaning, corresponding to the speaker's reasoning. In this case incompleteness is due to an omission of words or structures which in grammatical analysis is corrected by (mental) transformation of the clauses to which the omitted terms are included. This is the theory of ellipsis, which is also present in the *Postillas*and for which the author reserves considerable space in the text under study. In the fourth part ellipses are studied as "figures of construction", though the author does not refer to them explicitly as implicit counterparts of the proposition, in order to demonstrate the logic of the reasoning used in the reconstruction of the proposition, although he may speak of the meaning and intelligence of the texts. He treats them merely as characteristics common to Portuguese-language literary texts. Consider the following conceptual paragraph:

> (21) Ellipsis, which consists in the suppression of one or more words that are readily understood in light of meaning, is the most frequent of all figures of construction and consequently the figure with which we must most occupy ourselves, since a perfect understanding of these is extremely important to the right understanding of the prose authors and poets. (Sotero dos Reis 1868, p. 87)
>
> A Ellipse, que consiste na suppressão de uma ou mais palavras, que facilmente se subentendem pelo sentido, é de todas as figuras de construcção a mais frequente, e por conseguinte a que mais tem de occupar-nos, pois o seu perfeito conhecimento muito importa á boa intelligencia dos prosadores e poetas. (Sotero dos Reis 1868, p. 87)

The ellipses present in the texts selected as examples to serve as models for analysis are "unfolded", although without theoretical references to logical method. In reading a verse by Bernadim Ribeiro, for example, the grammarian rewrites the verse, unfolding and reinterpreting by including words which, inasmuch as they are implicitly understood, must be recovered. Here is the example :

> (22) *Triste de mim que será*? In this passage the grammatical attribute "feito" is implicit and "triste de mim" is its complement. The elliptical proposition is equivalent to the other, complete, proposition, "Que seráfeito de mim triste?" (Sotero dos Reis 1868, p. 94)
>
> *Triste de mim que será*? Nesta passagem subentende-se o attributogrammatical, *feito*, do qual, triste de mim é complemento, equivalendo a proposição elliptica, á est'outra completa "Que será feito de mim triste? (Sotero dos Reis 1868, p. 94)

Another characteristic of the general theory to be traced in the *Postillas* is its reference to the relation "language/thought". In this domain we see, for example, that Sotero dos Reis refers to *juízo* or "judgment", albeit only in the first part of his grammar, in which he conceptualizes the proposition[26] and subject but does not pause to theorize. He also omits to mention *raciocínio* (reasoning), and all of his mentions of logic relate to what he calls *lógicagramatical* (grammatical logic) which in the final analysis, in the context of the work, is the same as grammatical correctness. There is nothing in the work regarding the logic of reasoning or the correspondence of language and thought. Thought, according to the general theory, is the result of a process involving logical reasoning and occurs in three stages: in the first, the individual conceives of a reality; in the second, he judges that which he has conceived;

[25] This thesis was defended as well by Duarte (1859, p. 43): "Our statement that the Portuguese language has two verbs that enunciate being does not mean that others do not express it as well. We observe only that *ser* and *estar*signify this in a much more expressive manner in that they are the verbs used when an attribute is enunciated by a concrete idea, such as 'I am a lover of virtue' ... 'I am ill'.

[26] See the excerpt here in this text (11).

© 2019 Global Journals

and third, he formulates a logical argument, an evaluation, regarding what he has conceived and judged, which is then uttered in language (in words and gestures). This ought to be the logical foundation to be proven, but the "grammatical logic" of which our author speaks refers merely to the traditional grammatical norm, considered correct or perfect. In any event, although partial, the general theoretical relation if not realized in this case is implied.

Beyond the connection with general grammar which for good or ill exists here, even if it is contrary to the principles of rationalist theory there is an indication of another theoretical orientation, thought not one that is productive in this work. Soterodos Reis shows himself a man of his times (the XIXth Century) when he explains the organization of the *Postillas* using the metaphor of an "anatomy of language", referring perhaps to another of the theories of the age: naturalism, which employs the idea of language as an organism. The metaphor refers to the segmentation of the content to be explicated, namely the parts of the speech, which are not however the immediate topic of the work as mentioned above.

## V. The Treatment of "Construction" in the *Postillas*

The *Postillas* have as a fundamental objective the study and analysis of syntax, for the work is a "guide to Portuguese construction". For this reason it will be relevant to examine how the author classifies the elements of syntax, or "the proposition", which we will undertake to compare with the "theory of construction" of Du Marsais, an author explicitly cited by Sotero dos Reis. We have already dealt with here the link between Sotero dos Reis and the general theory of Du Marsais through the adoption of the term "construction", although not in the same sense in which the French scholar uses the term.[27]

At the outset we observe that the Brazilian grammarian presents no clear systematization of the syntactic theory used to carry out his analysis of Portuguese literary texts, even though, as we commented above, the first part of the work is dedicated to presenting of the basic concepts with which he will be operating. As may be observed and as we stated above, Sotero dos Reis simply makes use of a few terms and concepts originating in French theory, and yet his analyses are primarily traditional, as may be observed from a comparison of the classification schemes of our author and those of Du Marsais.[28]

[27] In this text see excerpts (2) and (4) on the conception of Sotero dos Reis and (14) and (15) for that of Du Marsais.

[28] Barbosa (1822, p. 201) who is another source for Sotero dos Reis, speaks of subordinated clauses: "Thus too in any period or complete thought there is not, nor could there be, any but three types of clauses that enter into its composition, and these are: the Principal, the Subordinate (in which the incidents are included because they invariably form part either of the subject or of the attributes of one another) and finally the governed, so-called because they serve as complements to the verbs and propositions."



© 2019 Global Journals

*Table 2:* The treatment of "construction"

| Du Marsais (1754, pp. 73-92) | Sotero dos Reis (1868, pp. 5-25) |
|---|---|
| Proposition<br>Absolute or complete.<br>Relative or partial proposition. We also call them "correlative". | Proposition<br>Absolutes: principal and approximate (corresponding to syndetic and asyndetic coordinates).<br>Subordinates: circumstantial, completive or integral, whole, partial and incidental. |
| Period<br>A set of relative or partial propositions forms the period.<br><br>Division: the period is composed by:<br>1. members;<br>2. submembers;<br>3. members and submembers. | Period<br>A complete phrase, a perfect and absolute meaning, formed by one or more propositions<br>Division: a period may be:<br>1. simple;<br>2. compound. |
| Divisions and types of propositions:<br>1st<br>Direct proposition (verb in the indicative mood).<br>Indirect proposition (verb in some other).<br>2nd<br>Absolute or complete proposition.<br>Relative or partial proposition.<br>3rd<br>Explanatory (explicit) proposition.<br>Determinative (implicit or elliptical) proposition.<br>4th<br>Principal proposition.<br>Incidental proposition.<br>5th<br>Explicit proposition.<br>Implicit or elliptical proposition.<br>6th<br>The proposition as viewed grammatically.<br>The proposition as viewed logically. | Divisions and types of propositions:<br>1st<br>Absolute propositions:<br>- principal;<br>- approximate [corresponding to syndetic and asyndetic coordinates].<br>2nd<br>Subordinate propositions:<br>- circumstantial;<br>- completive or integral;<br>3rd<br>Other terms corresponding to the above:<br>- whole, corresponding to absolute;<br>- partial, corresponding to subordinate, circumstantial, incidental and completive. |

This comparison of the classification of propositions in our two grammarians demonstrates once again the theoretical differences among them. With respect to the classification of propositions, this divergence is evident both in the use of the term "subordinate", which in this sense plays no role in the theory of Du Marsais, and in the classification of periods. The latter, rather than referring to "subordinate" phrases, refers to "relative" and "correlative" propositions, saying:

> (23) 2nd. When the meaning of a proposition places the spirit in the situation of requiring or presupposing the meaning of another proposition, we say that these propositions are relative and that one is the correlative of the other. These then are joined by conjunctions or relative terms. The mutual relations that these propositions possess among themselves constitute a total meaning that logicians term a compound proposition, and these propositions which make up the whole are partial propositions. (Du Marsais 1754, p. 82b)
>
> 2 °. Quando o sentido de uma proposição coloca o espírito na situação de exigir ou se supor o sentido de outra proposição, dizemos que essas proposições são relativas e que uma é a correlativa da outra. Então essas proposições são unidas por conjunções ou por termos relativos. As relações mútuas que essas proposições têm entre si formam um sentido total que os Lógicos chamam proposição composta; e essas proposições que formam o todo são proposições parciais. (Du Marsais 1754, p. 82b)

As to the period, on a superficial level the difference between these classifications may already be observed: Du Marsais does not use the categories "simple and compound" as Sotero dos Reis does, saying that the period is composed by *membros* and *incisos* (members and submembers). The definition of the period is another dissonant note in the two theories of grammatical theory, for while the Brazilian identifies period as a *frase total* (total phrase) the French author does not admit "phrase" as a theoretical term, but only as a generic term as shown above (see excerpt 13). And both these interpretations differ from that of Beauzée, as presented above.

Finally, it is appropriate to consider the theoretical difference among the classification of propositions, although naturally the focus of both is its syntactical and semantic function. In Du Marsais, this classification is more complex, in that it is arranged in a



© 2019 Global Journals

series of four divisions, indicating differences among the morphosyntactic, the syntactic-semantic and the logico-cognitive, the classification of Sotero dos Reis is essentially based on the syntactic-semantic role of each proposition/sentence.

Sotero dos Reis creates a classification which features only two divisions, based on syntactic and semantic criteria. For this reason he views principal and approximate propositions in terms of syntactic autonomy and semantic completeness; that is, those which do not present syntactic dependence among themselves, though all propositions maintain semantic relations in the composition of the meaningful whole that is the period. The connection of these propositions may come about as a matter of mere proximity, with or without the aid of connectors (conjunctions). Likewise, in working with the syntactic and the semantic he classifies sentences both in terms of the syntactic connection created by means of connectors and by semantic means, that is, in terms of the semantic connection that principal and subordinate propositions maintain among themselves.

The six-part classification of Du Marsais is broader in that it employs various criteria, although there remain lacunae and repetitions. Let us examine the interpretation of these divisions based on the criteria which gave rise to them.

*Table 3:* Du Marsais classification criteriasummary

| | |
|---|---|
| 1st division: | a morphological criterion based on consideration of the verbal mood present in propositions (verb in the present indicative or other mood) |
| 2nd division: | a morphological criterion based on consideration of the verbal mood present in propositions (verb in the present indicative or other mood) |
| 3rd division: | a syntactic criterion based on the anaphoric referential relations among the terms of the propositions, with or without a restrictive or specifier meaning among the terms of the relation. |
| 4th division: | a syntactic and semantic criterion, autonomy, dependence, order of terms in a proposition |
| 5th division: | a syntactic and semantic criterion used in the consideration of the syntactic-semantic whole or the syntactic incompleteness of the proposition, without prejudice to its understanding in the latter case. |
| 6th division: | a logico-syntactic criterion used in considering the relation of words in the proposition and statement with thought. |

The repetitions referred to above are visible, for example, in the classifications set forth in the second and fourth division, which deal with the same grammatical fact: the grammatical autonomy and dependence of the propositions. The fourth division introduces the idea of order, in that the proposition is the "consequential" incident of an "antecedent" and these are generally positioned side by side. Despite this the classification is broad enough to take into account grammatical facts relevant to the theory, such as ellipsis, giving rise to propositions of the fifth division, as well as the relation of language to thought, judgment and reasoning in the formation of the proposition, as the sixth division provides. Inthat case as well, there is overlap among the phenomena, in that propositions, from a grammatical and logical viewpoint, are analyzed in terms of their explicit or implicit formation (5th division).

## VI. Final Considerations

Since the fathers of Port Royal composed and published a new mode of understanding and analyzing language in the *Grammairegénérale et raisonnée de Port-Royal* in 1660, creating a linguistic theory termed "general", the ecology of the linguistic sciences has changed. The Greco-Roman theory, which had prior to Port Royal been the only theory available for use in the interpretation of language and the construction of the universe of linguistic science, gained a competitor which, though subsidiary to it, brought new possibilities for the knowledge and explication of language. Some grammars began working in parallel with the two theories: the classical Greco-Roman (theory 1) and the general theory (theory 2). This state of affairs continued into the XIXth Century, when other technical options (e.g. evolutionary, comparative, historical, structuralist linguistics etc.) became part of the universe of grammatical analysis as well. From that moment on, grammars in many cases evolved into theoretical mosaics in which various theories were combined, though the Greco-Roman theory (theory 1) remained at a minimum a source of terminology and concepts whose basis is a dynamic one in that it lends itself to continuous debate and revision.

The analysis carried out in this article is an example of this situation in that we have shown how Francisco Sotero dos Reis made use of the Greco-Roman theory in combination with the general theory to interpret, in his *Postillas de grammaticageral,* linguistic facts of the Portuguese language through an analysis of



© 2019 Global Journals

literary texts, even if the author produced no new knowledge with respect to grammatical theory. We would emphasize, however, that theoretical work was not the aim of our grammarian, who intended only to apply the general theory to analyze literary texts in Portuguese.

The focus of this work was, on one hand, to bring this XIXth-Century Brazilian work on grammar to light in order to investigate the state of the author's linguistic knowledge in the work and to verify, on one hand, how Sotero dos Reis dealt with the general theory in order to see whether this theory was productive in his work, and on the other hand to trace, based on the terminology and concepts present in the work, the *retrospective horizons* of the grammarian in order to determine from its effects (the linguistic facts analyzed) the causes that led the author to interpret these as the causes of his theoretical choices, as for example, in defining the substantive verb as the affirmation of the attribute in the subject. Our conclusion on this question is that these interpretations had as their cause the author's greater understanding of the classical theory and lesser understanding of the general theory, which led to hybrid theoretical analyses in which the classical theory prevails.

In the general theoretical framework of the work by Sotero dos Reis the traditional theory is clearly dominant. The author does work with certain concepts of the general theory (e.g., the substantive verb, construction, proposition etc.) but is unable even to formulate concepts narrowly fitted to its principles (the "general theory") or as a result to demonstrate in conducting his analyses the difference in interpretation stemming from this theory. His analysis of literary excerpts, for example, are not carried out in accordance with the concept of "proposition" in the sense that this term is found in the texts of both the GGR and the encyclopedists. The analyses of the Brazilian grammarian are carried out, as shown in item 4, using traditional theory in the identification of absolute and subordinate clauses (though he calls these "propositions") which, when joined, compose the period.

Another relevant point is that the analysis does not seek to demonstrate the logic of reasoning in the relation of the statement with the thought which originates it. On the contrary, Sotero dos Reis speaks of "grammatical logic" when he judges as incorrect a statement not in accord with classical literary usage, that is, as a norm which may only have been observed in literary texts. The problem in taking such a stance is not exactly the condemnation of the grammatical imprecision detected but that the grammarian does not work to demonstrate the "logic of ratiocination" that led the writer, the author of the excerpt, to produce the grammatical formulation that he has analysed and found to be incorrect. Rather, Sotero dos Reis merely rewrites the text in order to correct what he judges incorrect, in order to demonstrate how the text should be written in accordance with the logic of grammar. This makes it clear that the grammarian operates more on the plane of expression and less on the plane of the comprehension of language, positioning him predominantly in the camp of traditional grammar and not that of general grammar.

Contrary to this tendency, however, the analysis of a peculiarity of the Portuguese language (*idiomatism*) suggests that our grammarian observes one of the maxims of the general theory — according to which to every verb there corresponds a subject — when he theorizes on the subject of the "unipersonal verb" *haver* and attributes to it a "concealed subject" which, however, in our view, functions neither grammatically nor logically as a subject. In other cases, in which he studies ellipsis, his reasoning is identical and is in this respect identical to the general theory.

Research on the *Postillas de grammaticageral* has made clear that although the author worked with concepts of the general theory his work is not representative of this model. It is impossible to state however whether the lack of theoretical consistency with respect to this theory is due to the fact that the author had no direct access to the primary sources of rationalism or rather failed to understand correctly the general theory that represented something novel in his work. As to secondary sources he most certainly knew the *Grammaticaphilosophica da lingua portuguesaouprincipios da grammaticageralapplicados á nossalinguagem*of JeronymoSoares Barbosa, the only Portuguese grammar cited in the *Postillas*and then only in the introduction. The work analysed is therefore more traditional and less general in nature.

## References Références Referencias

*Primary sources*

1. Barbosa, J. S. (1822). *Grammaticaphilosophica da lingua portuguesa ou Principios da grammatica geral aplicados à nossa linguagem.* Lisboa: Tipographia da Academia das Sciencias.
2. Beauzée, N.(1765). *L'Encyclopédie*. Éditionsnumérique, colaborative et critique. Disponibledans http://enccre.academie-sciences.fr/encyclopedie,
3. Beauzée, N. (1767). *Grammaire générale ou exposition raisonnée des éléments nécessaires du langage: pour servir de fondement à l'étude de toutes les langues*. Tome premier. Paris: De l'imprimerie de J. Barbou.
4. Du Marsais, C. Ch.(1754). *L'Encyclopédie*. Éditions numérique, colaborative et critique. Disponible dans http://enccre.academie-sciences.fr/encyclopedie.

© 2019 Global Journals

5. Galvão, T. de C. (1863). *Juísocritico*. (1863). In: Reis Sotero (1863).
6. Reis, F. S. dos. (1863).*Postillas de grammmatica geral applicada á linguaportugueza pela analyse dos classicos, ou guia para a construcçãoportugueza*. [São Luiz]: Typ. B de Mattos.
7. Reis, F. S.dos.(1870). *Postillas de grammmatica geral applicada á linguaportugueza pela analyse dos classicos, ou guia para a construcçãoportugueza*. (3ª ed.). Maranhão [São Luiz]: s.l. Disponível em https://archive.org/details/DELTA53507FA/page/n5 [incompleteedition].
8. REIS, Sotero dos. (1868). *Postillas de grammmatica geral applicada á linguaportugueza pela analyse dos classicos, ou guia para a construcçãoportugueza*. (2ª ed.). Maranhão [São Luiz]: s.l. Disponível em https://archive.org/details/DELTA53507FA/page/n5

*Theoreticaltexts and others*

1. Auroux, S. (2006) Les Méthodes d'Historicisation. Histoire, Epistémologie, *Langage,* t. XXVIII, f. 1.
2. Auroux, S. (2009). *A revolução tecnológica da gramatização*. (3ª ed.). Trad. do francês por Eni Orlandi. Campinas, SP : UNICAMP.
3. Burton, R. F. (1880). *Os Lusíadas (The Lusiads)*. Englished by Richard Francis Burton and edited by his wife Isabel Burton. London: Tinsley Brothers. Online in: http://www.burtoniana.org/books/1880-Os%20lusiadas/Os%20lusiadas%20Vol%201.pdf
4. Cavaliere, R. S. (2010) A corrente racionalista da gramática brasileira no século XIX. In: Assunção, C.; Fernandes, G.&Loureiro, M. (Orgs.). I*deias linguísticas na Península Ibérica (séc. XIV a séc. XIX)*.Münster: NodusPublikationem, 1(107-118).
5. Colombat, B.;Fournier, J.-M. & Puech, Ch.(2017). *Uma história das ideias linguísticas*. Translated from French by Marli Quadros Leite e Jacqueline Léon. São Paulo: Contexto.[2010]
6. Gonçalves, M. F. C. (1998). *Grammatica portugueza– Manuel Dias de Sousa*. Noticeau Corpus de textes linguistiques fondamentraux. Disponible dans:http://ctlf.ens-lyon.fr/n_fiche.asp?n=402
7. Gonçalves, M. F. C.(2006).Iluminismo e pensamento linguístico em Portugal: o exemplo das gramáticas filosóficas. *VII Congrés de Lingüística General: actes.* Barcelone: Universitat de Barcelona, p.146. Disponível em: https://dspace.uevora.pt/ rdpc/bitstream/10174/3059/1/Barcelona%202006.pdf.
8. Leal, A. H. (1873). P*antheon maranhense: ensaios biographicos dos maranhenses illustres já fallecidos*. Lisboa : Imprensa Nacional, vol1.
9. Leite, M. Q. (2018).*Compendio de grammatica philosophica da língua portugueza*, *de A. da Costa Duarte: edições em confronto*. *Confluência*, [S.l.], (58) 99-130. doi:http://dx.doi.org/10.18364/rc.v1i55. 285.
10. Leite, Marli. Quadros.; PELFRENE, Arnaud (Orgs.) (2018a). *Compendio da GrammaticaPhilosophica da LinguaPortugueza, de Padre Antonio da Costa Duarte* (6ª edição, 1877). São Paulo: FFLCH. https://doi.org/10.11606/9788575063170
11. Leite, M. Q. (2018b). *Anotações sobre o Compendio da GrammaticaPhilosophica da LinguaPortugueza, de Padre Antonio da Costa Duarte.* In: LEITE, M. Q.&Pelfrene, Arnaud (orgs.) (2018a)
12. Leite, Marli. Quadros.; PELFRENE, Arnaud (orgs.).*Grammaticaportugueza, de Francisco Sotero dos Reis*. (2ª edição 1871). São Paulo: FFLCH, 2019. DOI 10.11606/9788575063811.
13. Leite, M. Q.(2019) *Teoria e método na Grammaticaportugueza de Francisco Sotero dos Reis*. In: Leite, M. Q. PelfrenE, A. (orgs.). *Grammaticaportugueza, de Francisco Sotero dos Reis*. (2ª edição, 1871). São Paulo: FFLCH. DOI 10.11606/9788575063811
14. Polachini, B. (2017). *Uma historial serial da gramática brasileira oitocentista de língua portuguesa*. Tese de doutorado. Universidade de São Paulo (USP). Disponível em: https://teses.usp.br/teses/disponiveis/8/8139/tde-06072018-120101/pt-br.php
15. Santos, M. H. (2015) A gramática racionalista em Portugal no século XIX. In: León, R. & Duarte, S.*A gramática racionalista na Península Ibérica.* Porto: FLUP.

*Grammars and dictionary*

1. Arnauld, A. & Lancelot, C. (2001). *Gramática de Port-Royal, ou gramática razoada.* (2ª ed.). Trad. Bassetto, B. F. &Murachco, H. G. São Paulo: Martins Fontes.[1660]
2. Argote, Jeronymo Contador de. (1725) *Regras da linguaportugueza, espelho da lingua latina, Ou disposição para facilitar o ensino da língua Latina pelas regras da Portugueza*(...). (2ª edição). Lisboa: Officina da Musica.
3. Arnauld, A. & Lancelot, C. (1810). *Grammaire générale et raisonnée de Port-Royal, avec un Essai sur l'origine et les progrès de la langue françoise*, par M. Petitot, et suivie du commentaire de M. Duclos. Paris:Bossange et Masson. Disponible en: gallica.bnf.fr
4. Bacellar, B. de L. e M. (1783). *Grammaticaphilosophica e orthographia racional da LinguaPortugueza*. Lisboa: Officina de Simão Thaddeo Ferreira.
5. Bezerra, M. S. da S. (1861). *Compendio de grammaticaphilosophicado liceu provincial*. Ceará: Tip. Social.



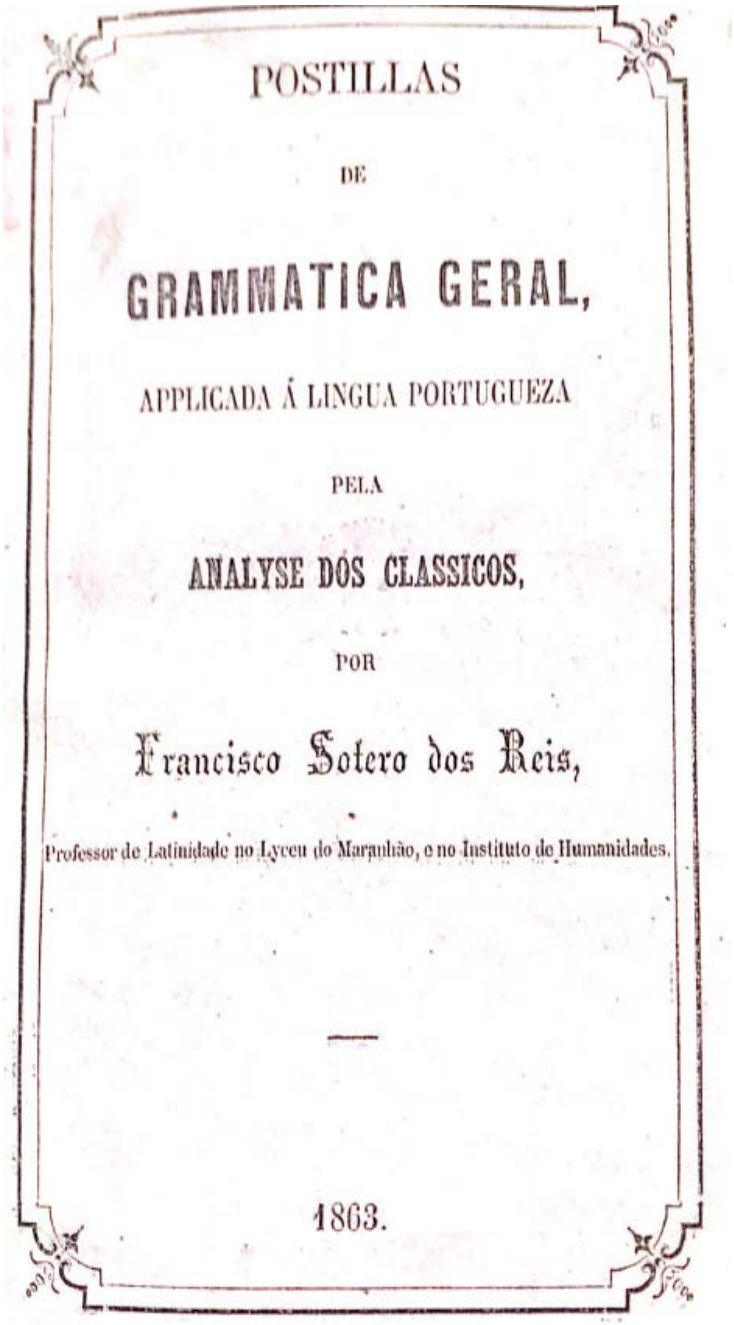
© 2019 Global Journals

6. Bithencourt, R. C. (1862). *Epitome de grammaticaphilosophica da linguaportuguza*. Rio de Janeiro: Eduardo & Henrique Lammert.
7. Blake, A. V. A. S. (1902). *Diccionario bibliographic obrazileiro*. Rio de Janeiro: Imprensa Nacional, 7(318).
8. Condillac, É. B. (1775). *Cours d'étude pour l'instruction du prince de Parme... Directions pour la conscience d'un roi*. Parme. Disponbleen: https://gallica.bnf.fr/ark:/12148/bpt6k42605n?rk=21459;2
9. Duarte, A. da C. (1829). *Compendio de grammaticaportugueza, para uso das Escolas de Primeiras Letras*. Maranhão: Tipografia Nacional.
10. Duarte, A. da C. (1840). *Compendio da grammaticaphilosophica da linguaportugueza*. (2ª edição). Maranhão: S.l.
11. Duarte, A. da C. (1853). *Compendio da grammaticaphilosophica da linguaportugueza*. (3ª edição). Maranhão: Tipografia do Frias.
12. Duarte, A. da C. (1859). *Compendio da grammaticaphilosophica da linguaportugueza*. (4ª edição). Maranhão: Livraria do Editor F. Fructuoso Ferreira.
13. Duarte, A. da C. (1862). *Compendio da grammaticaphilosophica da linguaportugueza*. 5ª edição). Maranhão: Tipografia do Frias.
14. Duarte, A. da C. (1877) *Compendio da grammaticaphilosophica da linguaportugueza*. (6ª edição). Livraria do Editor Antonio Pereira Ramos D'Almeida. Acessívelem: http://ctlf.ens-lyon.fr/t_resul.asp?num=3373.
15. Du Marsais, C. Ch. (1729). *Les Véritables principes de la grammaire ou nouvelle grammaire raisonnée pour apprendre la langue latine.* Paris. Disponible dans:*https://gallica.bnf.fr/ark:/12148/bpt6k843410*
16. Lobato, A. J. dos R. (1770). *Arte da grammatica da linguaportugueza*. Lisboa: Regia Officina Typografica, 1770. Acessível em http://ctlf.ens-lyon.fr/t_fiche.asp?t=778
17. Melo, J. C. do C. e. (1818). *Gramática filosófica da linguagem portuguêza*. Lisboa: Impressão Régia, 1818. Acessível em: http://ctlf.ens-lyon.fr/t_texte.asp?t=810
18. Murici, J. da V. (1864). Grammaticageral . Bahia: Typ. Constitucional de França Guerra.
19. Reis, F. S. dos. (1866). *Grammatica portugueza,accomodada aos principiosgeraes da palavra, seguidos de immediadaapllicação pratica*. Maranhão[São Luiz]: Typ. B. de Mattos
20. Reis, F. S. dos. (1871). *Grammatica portugueza,accomodada aos principiosgeraes da palavra, seguidos de immediadaapllicação pratica*. (2ª edição). Maranhão [São Luiz]: Typ. de R. de Almeida & C. Acessível emhttp://ctlf.ens-lyon.fr/t_texte.asp?t=829
21. Reis, F. S. dos. (1877). *Grammaticaportugueza, accomodada aos principiosgeraes da palavra, seguidos de immediadaapllicação pratica*. (32ª edição). Maranhão [São Luiz]: Livraria de Magalhães.
22. Ribeiro, E. C. (1881). *Grammaticaportugueza philosophica*. Bahia [Salvador]: Imprensa Economica.
23. Silva, A. de M. (1806).*Epitome da GrammaticaPortugueza*. Lisboa: Off. Simão Thaddeo Ferreira. Acessível em: http://ctlf.ens-lyon.fr/t_texte.asp?t=805
24. Sousa, M. D. de. (1804). *Gramática Portugueza ordenada segundo a doutrina dos mais celebres Gramaticos conhecidos, assim nacionaes como estrangeiros, para facilitar á mocidade Portugueza o estudo de lêr e escrever a sua proporia Lingua, e a inteligencia de outras em que quizer instruir*. Coimbra: Real Imprensa da Universidade. Acessível em: http://ctlf.ens-lyon.fr/t_texte.asp?t=801.




© 2019 Global Journals

## Anexo[29]



POSTILLAS

DE

GRAMMATICA GERAL,

APPLICADA Á LINGUA PORTUGUEZA

PELA

ANALYSE DOS CLASSICOS,

POR

Francisco Sotero dos Reis,

Professor de Latinidade no Lyceu do Maranhão, e no Instituto de Humanidades.

1863.

[29] British Library edition (General Reference: Collection 12943.aa.27).



© 2019 Global Journals

This page is intentionally left blank

© 2019 Global Journals

Global Journal of human-social science: G
Linguistics & Education
Volume 19 Issue 10 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-460X & Print ISSN: 0975-587X

# Empirical Research on Occupational Adaptation of Graduates from Higher Vocational Colleges and Educational Considerations

By Su Yunxia & Sun Minggui

*Donghua University*

*Abstract-* Through empirical research, this paper puts forward and validates the theoretical model of occupational adaptation for vocational college graduates, which consists of four dimensions: occupational cognitive adaptation, occupational psychological adaptation, occupational skills adaptation, interpersonal and professional environment adaptation. The study finds that the overall level of occupational adaptation of graduates from higher vocational colleges is low; occupational adaptation is affected by years of graduation, and income satisfaction level; occupational psychological adaptation is affected by years of graduation, unit property, and income satisfaction level; interpersonal and professional environment adaptation is affected by income satisfaction level. Therefore, higher vocational colleges need to deepen the work of vocational guidance, improve the training mode of talents in higher vocational colleges, strengthen the mental health education of students in colleges, and guide students to establish correct values.

*Keywords: higher vocational college; graduates; occupational adaptation; education.*

*GJHSS-G Classification: FOR Code: 139999*




*Strictly as per the compliance and regulations of:*




© 2019. Su Yunxia & Sun Minggui. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

# Empirical Research on Occupational Adaptation of Graduates from Higher Vocational Colleges and Educational Considerations

Su Yunxia[α] & Sun Minggui[σ]

*Abstract-* Through empirical research, this paper puts forward and validates the theoretical model of occupational adaptation for vocational college graduates, which consists of four dimensions: occupational cognitive adaptation, occupational psychological adaptation, occupational skills adaptation, interpersonal and professional environment adaptation. The study finds that the overall level of occupational adaptation of graduates from higher vocational colleges is low; occupational adaptation is affected by years of graduation, and income satisfaction level; occupational psychological adaptation is affected by years of graduation, unit property, and income satisfaction level; interpersonal and professional environment adaptation is affected by income satisfaction level. Therefore, higher vocational colleges need to deepen the work of vocational guidance, improve the training mode of talents in higher vocational colleges, strengthen the mental health education of students in colleges, and guide students to establish correct values.

*Keywords: higher vocational college; graduates; occupational adaptation; education.*

## I. Introduction

Since the State Council issued the decision on deepening education reform and comprehensively promoting quality education in June 1999, higher vocational education (including vocational colleges) has gradually developed into half of Chinese higher education, which has accelerated the popularization process of higher education. However, since 2002, the graduates have been employed one after another after the enrollment expansion of colleges and universities in China. The employment pressure and cruel employment reality make many college students blindly choose "employment first and selection second" and the phenomenon of frequent "job hopping" of college students' employees in the period of occupational adaptation occurs (Xiao, 2014). From the perspective of new employees' performance in the workplace, new employees generally have problems such as difficult to adapt to the work intensity, unable to properly handle interpersonal relationships, and with high psychological pressure, which can attribute to occupational adaptation.The decision of the State Council on accelerating the development of modern vocational education (GF [2014] No. 19) emphasizes that vocational education should serve the needs, take employment as the guidance, connect the teaching process with the production process, and focus on improving the employability of young people. Therefore, in the context of economic and social transformation and industry upgrading, as education type closely connected with industry and market, it is necessary to pay attention to the improvement of students' employability. It becomes quite important for vocational colleges to cultivate students' occupational adaptability before employment. In this context, there is great theoretical and practical implication to investigate the adaptation of college graduates. It can expand the research field of adaptation, reveal the problems of adaptation of college graduates and promote the employment education of colleges.

## II. A Study on the Structure of Occupational Adaptation of Graduates from Higher Vocational Colleges

*Review of the Concept, Structure and Measurement of Occupational Adaptation*

Making a comprehensive survey of the relevant research of domestic and foreign scholars, scholars have summed up and interpreted the concept of occupational adaptation from three perspectives. The first is from the process theory/state theory Fang, 2001; Dai, 2002). The second is from the interaction theory/theory of individual active response (Pan, 2013; Veenman, 1984). The third is from socialization/content of cultural adaptation (Yuan et al., 1992; Chen, 1999). Domestic and foreign scholars have a different understanding of occupational adaptation, which make the measurement methods of adaptation different. Measurement research abroad mainly includes Campbell's six-dimensional structure (1990), Huebner's four-dimensional structure (2002) based on Campbell's research, and Savickas and Porfeli's four-dimensional structure (2012). According to different research objects, there are different measurement methods in domestic measurement research. For example, there are five-dimensional structure (Wang, 2018) and three-dimensional structure (Yin, 2015) for the measurement

*Author α: Shanghai Publishing and Printing College, Shanghai, China.*
*Author σ: Donghua University, Shanghai, China.*
*e-mail: sunnysu545@126.com*



© 2019 Global Journals

of occupational adaptation with teachers as the research object, and four-dimensional structure (Tang, 2009) for the adaptation with college students as the research object.

*Theoretical Conception and Empirical Verification of Occupational Adaptation Structure of Higher Vocational College Graduates*

Based on the three research perspectives of domestic and foreign scholars on occupational adaptation, this study holds that the occupational adaptation of vocational college graduates is the process and result of the interaction between the individual professional quality and professional requirements as well as the working environment to achieve a harmonious balance, and the degree to which graduates meet the work itself and role. In this study, the occupational adaptation of vocational college graduates is defined as four factors: occupational cognitive adaptation, occupational psychological adaptation, occupational skills adaptation, interpersonal and professional environment adaptation. Because higher vocational students, undergraduates, and postgraduates belong to the subject of higher education in China, they have similar cognition to the occupational adaptation to some extent. Therefore, this study uses 22 items of adaptation compiled by Tang (2009) as the initial scale to measure the adaptation of higher vocational college graduates. Likert 5 scores are used in the scale, with options from "very inconsistent" to "very consistent" scoring 1 to 5, respectively.

Because the higher vocational education is employment-oriented, the students of vocational colleges have been in the practice state in the second semester of the third grade. Therefore, the graduates whose graduation time is 0-3 years are selected as the research object of this paper. The initial scale was predicted in four higher vocational colleges in Shanghai. Two hundred questionnaires were issued, 182 of which were recovered, with a recovery rate of 91%. Among them, 169 were valid questionnaires, with an effective rate of 93%. The statistical software SPSS21. 0 was used to conduct exploratory factor analysis on 22 items of occupational adaptation. If the factor load of the measurement item after rotation is less than 0.50 or the load on both factors is larger than 0.50, this study will delete the measurement item. In the end, 14 measurement items are retained. Using the factor analysis method of the orthogonal rotation axis (KMO value is 0.759, $\chi^2$ of Bartlett sphere test is 569. 586 (df=91), sig=0.000), four factors are obtained. The relevant statistics of factor analysis are shown in Table 1.

*Table 1:* Items and Factor Analysis of Occupational Adaptation Scale for Higher Vocational College Graduates.

| Items of Occupational Adaptation | Factor Loading[a] | | | |
|---|---|---|---|---|
| | Occupational Cognitive Adaptation | Occupational Psychological Adaptation | Occupational Skills Adaptation | Interpersonal and Professional Environment Adaptation |
| I have clear career goals and career plans | 0.572 | -0.432 | -0.230 | 0.056 |
| I can face difficulties calmly because I believe in my ability to deal with problems | 0.862 | -0.092 | 0.037 | -0.054 |
| When facing a difficult problem, I can usually find several solutions | 0.821 | -0.044 | 0.080 | -0.021 |
| I am confident in achieving my work goals | 0.810 | 0.077 | -0.097 | -0.175 |
| I am often confused about my work and prospects | -0.218 | 0.763 | 0.196 | 0.106 |
| I often have the idea of changing my job | -0.026 | 0.862 | 0.088 | 0.200 |
| I am often tired of my work | 0.067 | 0.757 | 0.197 | 0.312 |
| I often feel weak and uncomfortable | -0.037 | 0.111 | 0.800 | 0.003 |
| I feel a lot of pressure at work | -0.036 | 0.244 | 0.789 | 0.168 |
| The workload is too large, the work pace is too fast, and I feel very tired | -0.124 | 0.027 | 0.697 | 0.346 |
| The knowledge learned by the school falls behind the needs of practical application | 0.087 | 0.144 | 0.514 | 0.222 |
| I feel at a loss about the relationships around me | 0.111 | 0.249 | 0.258 | 0.674 |
| It's hard for me to change my role from a student to a professional person | -0.147 | 0.119 | 0.114 | 0.835 |
| Career stability is too bad, I have no sense of security | -0.217 | 0.229 | 0.269 | 0.712 |
| Initial eigenvalue | 4.471 | 2.334 | 1.342 | 1.094 |
| Variance contribution rate of extraction%(Cumulative 66%) | 31.93 | 16.67 | 9.59 | 7.81 |
| Variance contribution rate after rotation% | 18.27 | 16.59 | 16.56 | 14.58 |
| Number of items | 4 | 3 | 4 | 3 |
| Factor Cronbach α value | 0.886 | 0.905 | 0.830 | 0.847 |



© 2019 Global Journals

A: Extraction method is the principal component method; the rotation extraction method: Kaiser normalization maximum variation method; rotation axis converges to 5 iterations. If the factor load is larger than 0.5, the font should be bold.

According to the test items of each factor, they are named "occupational cognitive adaptation," "occupational psychological adaptation," "occupational skills adaptation," "and interpersonal and professional environment adaptation." The reliability of the four factors is above 0.8, and they all have good content validity. The Cronbach α coefficient of the total scale is 0.819, which meets the requirements of the development reliability of the scale (Nunnally, 1978). Correlation analysis showed that there was a significant correlation between occupational adaptation and each factor, the correlation coefficient was between 0.575-0.772, and each could reflect the connotation of occupational adaptation; mean while, the correlation coefficient of each is between 0.151-0.418, which belongs to the middle and low degree correlation, indicating that there are both convergence validity and discriminative validity.

This study entrusted 8 teachers to another eight vocational colleges in Shanghai to collect 341 valid questionnaires from graduates, covering graduates of science and engineering, literature and history, art, medicine, and agriculture disciplines as much as possible.Amos21.0 was used for confirmatory factor analysis. The results showed that $\chi^2/df=3.29<5$, RMSEA=0.074<0.08, CFI, GFI and NFI are all above 0.9, the theoretical model has a good fit, and the four-dimensional structure of occupational adaptation of vocational college graduates is verified.

## III. A Study on the Characteristics of Occupational Adaptation of Graduates from Higher Vocational Colleges

Spss 21.0 was used to analyze the 341 valid questionnaire data to study the characteristics of occupational adaptation of vocational college graduates.

*The General Situation of Occupational Adaptation of Vocational College Graduates*

The overall level of mean value of the occupational adaptation of vocational college graduates is low (M=3.22, SD=0.56).The order of the scores of each factor is interpersonal and professional environment adaptation (M=3.45, SD=0.68), cognitive adaptation (M=3.28, SD=0.71), skills adaptation (M=3.11, SD=0.76), psychological adaptation (M=3.06, SD=0.76). The average value of occupational adaptation of vocational college graduates and that of its various factors is lower than four scores, which shows that the overall adaptation of college graduates is in the lower middle level.

*Occupational Adaptation of Graduates of Different Genders*

T-test shows that male (M=3.29, SD=0.55) scores slightly higher than female (M=3.20, SD=0.57), and there is no significant difference (P>0.05) in terms of occupational adaptation (see Table 2).

*Table 2:* The Mean, Standard Deviation and T Test of Occupational Adaptation and Its Factors of Graduates of Different Genders.

| | Gender(M±SD) | | T Value |
|---|---|---|---|
| | Male(N=157) | Female(N=184) | |
| Occupational Adaptation | 3.29±0.55 | 3.20±0.57 | 0.671 |
| Cognitive Adaptation | 3.38±0.67 | 3.24±0.73 | 0.855 |
| Psychological Adaptation | 3.23±0.76 | 3.00±0.89 | 1.225 |
| Skills Adaptation | 3.19±0.70 | 3.10±0.79 | 0.536 |
| Interpersonal and Professional Environment Adaptation | 3.35±0.77 | 3.49±0.93 | -0.737 |

*Occupational Adaptation of Graduates with Different Graduation Years*

Univariate analysis of variance shows that there are significant differences in occupational adaptation and psychological adaptation among graduates with different graduation years.With the increase of graduation years, the interpersonal and professional environment adaptation of higher vocational college graduates has gradually improved.Occupational adaptation, occupational cognitive adaptation, psychological adaptation, and occupational skills adaptation all reach the lowest level in one year after graduation; however, the two-year and three-year graduates' adaptation, cognitive adaptation, psychological adaptation and skills adaptation are higher than those of the first year graduates, moreover, there is a significant difference between the adaptation of three-year graduates and that of two-year graduates (P<0.05), and there is a difference between the psychological adaptation of the two-year and three-year graduates and that of those just graduated (P<0.1) (see Table 3).



© 2019 Global Journals

*Table 3:* Analysis of Mean, Standard Deviation and Variance of Vocational Adaptation and Factors of Graduates with Different Years of Graduation.

| | Different Years of Graduation(M±SD) | | | | F Value | Scheffe |
|---|---|---|---|---|---|---|
| | Just Graduated(N=78) | One-year Graduates(N=85) | Two-year Graduates(N=98) | Three-year Graduates(N=80) | | |
| Occupational Adaptation | 3.07±0.56 | 2.96±0.50 | 3.26±0.40 | 3.38±0.70 | 3.030** | D>C |
| Cognitive Adaptation | 3.18±0.69 | 3.00±0.70 | 3.34±0.69 | 3.47±0.76 | 1.518 | |
| Psychological Adaptation | 2.87±0.83 | 2.64±0.84 | 3.28±0.68 | 3.21±0.74 | 2.602* | D>A,C>A |
| Skills Adaptation | 2.98±0.68 | 2.91±0.78 | 3.28±0.71 | 3.19±0.91 | 1.269 | |
| Interpersonal and Professional Environment Adaptation | 3.28±0.85 | 3.30±0.76 | 3.59±0.85 | 3.60±0.92 | 1.069 | |

***、**、*passed the test at the significance level of 1%, 5% and 10% (i.e., ***P<0.01, **P<0.05, *P<0.1);
A=Just Graduated, B=One-year Graduates, C= Two-year Graduates, D=Three-year Graduates

*Occupational Adaptation of Graduates Working in Units of Different Natures*

Univariate analysis of variance shows that there are significant differences in occupational, psychological adaptation among graduates working in units of different natures. The unit nature of the average score of adaptation from high to low is government agencies, government-affiliated institutions or social organizations, joint ventures, private enterprises, foreign-funded enterprises, state-owned enterprises, and self-employed enterprises. The unit nature of the average score of occupational cognitive adaptation from high to low is joint ventures, government agencies, government-affiliated institutions or social organizations, private enterprises, state-owned enterprises, foreign-funded enterprises, and self-employed enterprises. The unit nature of the average score of psychological adaptation from high to low is government-affiliated institutions or social organizations, government agencies, private enterprises, foreign-funded enterprises, self-employed enterprises, joint ventures, state-owned enterprises.Also, there is a significant difference between the psychological adaptation of graduates working in government agencies and state-owned enterprises and that of graduates working in foreign-funded enterprises (P<0.05). The unit nature of the average score of occupational skills adaptation from high to low is government agencies, private enterprises, self-employed enterprises, government-affiliated institutions or social organizations, state-owned enterprises and foreign-funded enterprises, joint ventures. The unit nature of the average score of interpersonal and professional environment adaptation from high to low is government agencies, joint ventures, foreign-funded enterprises, private enterprises, state-owned enterprises, government-affiliated institutions or social organizations, and self-employed enterprises (see Table 4).

*Table 4:* Analysis of Mean, Standard Deviation and Variance of Vocational Adaptation and Factors of Graduates Working in Units of Different Natures.

| | Unit Nature | | | | | | | F Value | Scheffe |
|---|---|---|---|---|---|---|---|---|---|
| | Government Agencies (N=37) | Government-affiliated Institutions or Social Organizations (N=48) | State-owned Enterprises (N=47) | Private Enterprises (N=72) | Foreign-funded Enterprises (N=42) | Joint Ventures (N=42) | Self-employed Enterprises (N=53) | | |
| Occupational Adaptation | 3.95±0.51 | 3.34±0.36 | 3.11±0.89 | 3.21±0.48 | 3.15±0.55 | 3.30±0.34 | 3.07±0.64 | 1.562 | |
| Cognitive Adaptation | 3.69±0.63 | 3.29±0.80 | 3.27±0.83 | 3.28±0.57 | 3.13±0.59 | 3.75±0.50 | 3.16±0.62 | 0.579 | |
| Psychological Adaptation | 3.58±0.79 | 3.71±0.82 | 2.76±0.64 | 3.00±0.75 | 2.90±0.47 | 2.78±0.84 | 2.79±0.62 | 2.743** | A>E,E>C |
| Skills Adaptation | 4.06±0.69 | 3.01±0.70 | 3.00±0.54 | 3.15±0.68 | 3.00±0.56 | 2.98±0.76 | 3.12±0.76 | 1.247 | |



© 2019 Global Journals

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Interpersonal and Professional Environment Adaptation | 4.50±0.43 | 3.37±0.81 | 3.39±0.75 | 3.42±0.78 | 3.43±0.65 | 3.78±0.57 | 3.37±0.61 | 1.061 | |

***、**、*passed the test at the significance level of 1%, 5% and 10% (i.e., ***P<0.01, **P<0.05, *P<0.1);

A=Government Agencies, B=Government-affiliated Institutions or Social Organizations, C=State-owned Enterprises, D= Foreign-funded Enterprises, E= Foreign-funded Enterprises, F= Joint Ventures, G= Self-employed Enterprises

*Occupational Adaptation of Graduates with Different Levels of Income Satisfaction*

Univariate analysis of variance shows that graduates with different income satisfaction levels have significant differences in occupational adaptation, psychological adaptation, and interpersonal and professional environment adaptation.With the improvement of income satisfaction, the level of occupational adaptation and its factors is showing an upward trend.Also, there is significant difference between the occupational adaptation of graduates with very dissatisfied income and graduates with relatively satisfing income and that of graduates with general income satisfaction (P<0.01). There are significant differences between the psychological adaptation of graduates with very dissatisfied income and graduates with relatively satisfing income and that of graduates with general income satisfaction (P<0.01). There are significant differences between the interpersonal and professional environment adaptation of graduates with general income satisfaction and graduates with relatively satisfing income and that of graduates with very dissatisfied income (P<0.01)(see Table 5).

*Table 5:* Analysis of Mean, Standard Deviation and Variance of Occupational Adaptation and Factors of Graduates with Different Income Satisfaction Levels.

| | Income Satisfaction Levels | | | | | F Value | Scheffe |
|---|---|---|---|---|---|---|---|
| | Very Dissatisfied (N=29) | Relatively Dissatisfied (N=57) | General (N=179) | Relatively Satisfied (N=76) | Very Satisfied (N=0) | | |
| Occupational Adaptation | 2.85±0.62 | 2.93±0.53 | 3.29±0.40 | 3.45±0.59 | —— | 5.755*** | C>A,D>C |
| Cognitive Adaptation | 3.08±0.63 | 3.15±0.58 | 3.25±0.50 | 3.52±0.77 | —— | 1.390 | |
| Psychological Adaptation | 2.56±0.74 | 2.65±0.81 | 3.11±0.63 | 3.44±0.54 | —— | 4.432*** | C>A,D>C |
| Skills Adaptation | 2.67±0.86 | 3.00±0.78 | 3.21±0.62 | 3.28±0.88 | —— | 2.960 | |
| Interpersonal and Professional Environment Adaptation | 2.89±0.76 | 3.00±0.81 | 3.64±0.71 | 3.66±0.68 | —— | 4.830*** | C>A,D>A |

***、**、*passed the test at the significance level of 1%, 5% and 10% (i.e., ***P<0.01, **P<0.05, *P<0.1);

A= Very Dissatisfied, B=Relatively Dissatisfied, C=General, D= Relatively Satisfied, E=Very Satisfied

## IV. Discussion

The Structure and General Characteristics of Occupational Adaptation of Vocational College Graduates

This study proposes and validates the structural model of occupational adaption of vocational college graduates, which is composed of occupational cognitive adaptation, occupational psychological adaptation, occupational skills adaptation, interpersonal and professional environment adaptation. Among them, occupational cognitive adaptation reflects the adaptation to current career goals, attitudes, teams and so on, psychological adaptation reflects the emotional adaptation to the current work content, way, atmosphere and so on, occupational skills adaptation reflects the adaptation of knowledge and technology to the current vocational needs, interpersonal and professional environment adaptation reflects the adaptation to the complex interpersonal relationship in work and the surrounding professional environment.Although the 22 items of occupational adaptation measure compiled by Tang (2009) were used as the initial scale of this study,there is great difference between the four-dimensional model of this study and the four-dimensional model of Tang (2009) while the latter includes four dimensions with different connotations: occupational skills adaptation (4 items), interpersonal relationship adaptation (4 items), occupational cognitive adaptation (4 items) and occupational objective environment adaptation (4 items)(see appendix).

On the whole, the average value of occupational adaptation of vocational college graduates is 3.22 scores of 5-subscales, and the adaptation level is in the lower middle state. According to the scores of various factors of occupational adaptation, interpersonal and professional environment adaptation is the best,



© 2019 Global Journals

which reflects that graduates have a relatively high degree of acceptance and compliance with professional norms, and they can communicate harmoniously with colleagues, friends, and superiors in their work. The second is the occupational cognitive adaptation, which reflects the vocational planning of vocational college graduates is relatively clear.The correct cognition of occupation has a direct impact on the individual's work direction and goal. To improve occupational adaptability, it is necessary to accurately evaluate and understand their professional interest, ability, and personality. Comparatively speaking, the average scores of the occupational skills adaptation and psychological adaptation of graduates of higher vocational colleges are both low, it is related to the poor quality of students in vocational colleges, the lack of learning initiative of students in vocational colleges, the need to explore and improve the training mode of talents in vocational colleges, and the psychological maladjustment of graduates caused by the gap between ideal and reality.

*Gender Differences in Occupational Adaptation of Vocational College Graduates*

This study shows that there is no significant difference between men and women in occupational adaptation and its various factors, which is inconsistent with the findings of Tang (2009).The reason may be related to the research object, the former is the higher vocational graduates, the latter is the postgraduates, and the two research objects have been in different educational levels in the domestic higher education system. When they move to work, the former belongs to skilled talents, the latter belongs to technical and engineering talents, and the former is less challenging, and competitive. As for the graduates of higher vocational colleges, there is no significant difference between men and women in occupational adaptation and its factors.

*The Difference of Working Yearsin Occupational Adaptation of Higher Vocational College Graduates*

Working years is an important variable to study career development and career maturity.According to the teaching age, some researches have divided the professional development of teachers into different stages. For example, Liu (2002) divided the first year of teaching into the survival stage, the second to the fourth year into the adaptation stage, and the fifth year into the mature stage.Similar to teachers' career experience, this study found that occupational adaptation of vocational college graduates reached the lowest level in one year after graduation, and they were in the stage of career survival, but the adaptation of two and three years after graduation was higher than that of just after graduation. Moreover, there was a significant difference between the adaptation of three years after graduation and that of two years after graduation, indicating the improvement of adaptation.

The psychological adaptation reaches the lowest level in one year after graduation, but the psychological adaptation of the two and three years after graduation is higher than that of the first year, and there are significant differences.This may be because college students will experience a stage of adaptation from unfamiliar to familiar after stepping on the job. Employees with a college degree who have worked for more than one year will be more likely to adjust their psychological work state as they gradually become familiar with all aspects of the work and have accumulated work experience and have a grasp of the future.

*The Difference in the Nature of Employment Units in Occupational Adaptation of Higher Vocational College Graduates*

There are significant differences in the psychological adaptation of vocational college graduates working in units of different natures.Moreover, there is a difference between the psychological adaptation of graduates working in government agencies and state-owned enterprises and that of graduates working in foreign-funded enterprises.It is consistent with the research of Yin (2015), social and economic status is an important environmental variable that affects occupational adaptation.The nature of the employment unit of higher vocational college graduates reflects their social and economic status. Therefore, the psychological adaptation level of higher vocational college graduates working in government-affiliated institutions or social organizations and government agencies is relatively high.The level of psychological adaptation of graduates working in state-owned enterprises is significantly lower than that of graduates working in foreign enterprises, which may be related to the more transparent salary and promotion system of foreign enterprises, while state-owned enterprises are more likely to emphasize education and qualifications, which is not conducive to the career development of higher vocational college graduates with lower degree, and may affect work mentality. Also, graduates working in private enterprises have a high level of psychological adaptation, which also reflects the pragmatic psychology of graduates.

*Income Satisfaction Difference in Occupational Adaptation of Higher Vocational College Graduates*

With the improvement of the level of income satisfaction, the level of occupational adaptation and its various factors is on the rise. Graduates from higher vocational college with different levels of income satisfaction has significant differences in occupational adaptation, psychological adaptation, interpersonal, and professional environment adaptation. It is consistent with the research of Yin (2015), economic income is one



© 2019 Global Journals

of the indicators of social and economic status, which is an environmental variable affecting occupational adaptation.The income level of higher vocational college graduates reflects their social and economic status. The higher the level of income satisfaction is, the higher the social and economic status is, the more positive the occupational adaptation level is.A better income level and a higher social and economic status are likely to lead to a good working attitude. Accordingly, the level of psychological adaptation will be higher.According to Maslow's hierarchy of needs theory, compared with vocational college graduates whose income satisfaction has not reached the general level, vocational college graduates whose income satisfaction has reached the general level have realized their physiological needs and will strive to meet the needs of safety, belonging and love.Therefore, there are significant differences between the interpersonal and professional environment adaptation of graduates with general income satisfaction and graduates with relatively satisfying income and that of graduates with very unsatisfactory income.

## V. Conclusion and Educational Thinking

This study proposes and validates the theoretical model of occupational adaptation for vocational college graduates, which consists of four dimensions: occupational cognitive adaptation, occupational psychological adaptation, occupational skills adaptation, interpersonal and professional environment adaptation. The study finds that the overall level of occupational adaptation of graduates in higher vocational colleges is low; occupational adaptation is affected by years of graduation, and income satisfaction level; psychological adaptation is affected by years of graduation, unit property, and income satisfaction level; interpersonal and professional environment adaptation is affected by income satisfaction level.From the perspective of analysis, the level of occupational adaptation of vocational college graduates is generally low, which is not only an inevitable phenomenon and stage in the process of college graduates' own growth, but also related to the job itself and the environment, as well as the lack of higher vocational college education and management. Therefore, combined with the research, this paper puts forward the following thoughts on employment education and related in vocational colleges.

Deepen the Work of Vocational Guidance and Improve the Vocational Cognition and Occupational Adaptation Level of Graduates

According to the theory of career maturity, the degree of readiness of an individual to make a practical and appropriate career choice before entering a career directly affects the individual's career choice, occupational adaptation, career satisfaction, and the realization of career goals. Vocational college students are in the stage of exploration and establishment of their whole career development. They conduct self-examination, role appraisal, and career exploration through school learning.Therefore, higher vocational colleges should combine the employment education with the employment guidance work, carry out the employment education according to the subject characteristics of each major, the psychology, and career ideal of the students of each grade, help the students to recognize the employment situation and themselves, carry out the personal career planning based on themselves, and adjust the career planning in time according to the actual situation, so as to prepare for employment before graduation, improve the career maturity of employment choice, and then improve the occupational cognitive adaptation level and adaptation level of vocational college graduates.

Improve the Talent Training Mode of Higher Vocational Colleges and Improve the Occupational Skills Adaptation Level of Graduates

To improve the talent training mode of higher vocational colleges is helpful to improve the occupational skills adaptation level of graduates. First of all, we should conduct extensive social research and clarify the goal of talent training. Based on extensive research on the needs of employers, with the cooperation of colleges and enterprises, the two levels of colleges and departments jointly discuss and determine the professional training programs that meet the needs of professional development, strengthen practical teaching, and combine curriculum teaching with work posts. Secondly, we should reform teaching methods and means to improve teaching quality. The project-driven teaching method is adopted as the teaching method, supplemented by other teaching methods, and under the mode of Internet sharing education, efforts are made to realize the organic integration of online and offline mixed teaching mode. Thirdly, in the practical teaching process, we should adhere to the industry and education, the cooperation of colleges and enterprises, meanwhile establish a new relationship between famous teachers and students to cultivate students' awe of occupation and dedication to skills and make students have a sense of occupation sanctity and mission.Finally, we should strengthen the construction of "double qualified teachers" teaching staff, and strive to build a high-quality teaching staff with an excellent political quality, professional ability, and teaching level. The high-quality teaching staff is not only the premise and guarantee of training the skilled professional talents but also can guide the students to choose the job and improve their occupational adaptation.



© 2019 Global Journals

Strengthen the Mental Health Education of Students and Improve the Level of Occupational Psychological Adaptation of Graduates

Among the factors of occupational adaptation, the level of psychological adaptation of vocational college graduates is the lowest, which is affected by the graduation year, the nature of the unit, and the level of income satisfaction.Therefore, it is urgent to strengthen the mental health education of vocational college students, help them solve mental health problems, and promote the overall improvement of the quality of vocational college students.In the mental health education of higher vocational colleges, we should pay attention to the integration of mental health education into professional disciplines, curriculum and daily life, to form a system of mental health education, which is normative and scientific.At the same time, strengthening the construction of mental health education teaching staff is the premise and guarantee of mental health education.The establishment of the mental health education system and the related teaching staff will help to improve the level of psychological adaptation of the graduates.

Carry Out Vocational Spirit Education and Guide Vocational College Students to Establish Correct Values

The level of income satisfaction affects the occupational adaptation, psychological adaptation, interpersonal and professional environment adaptation of vocational college graduates.Therefore, higher vocational colleges need to strengthen the education of students' ideal and belief, guide students with correct values, make them correctly understand the relationship between salary treatment and development prospect, interpersonal relationship, work stability, self-realization, so as to establish an ideal and a correct outlook on employment and success, and cultivate the professional spirit of love, dedication, hard work, cooperation and mutual assistance.

## Appendix

| Occupational Adaptation for Postgraduates (Tang,2009) | |
|---|---|
| Occupational Skills Adaptation | I can face difficulties calmly because I believe in my ability to deal with problems |
| | When facing a difficult problem, I can usually find several solutions |
| | I often feel weak and uncomfortable |
| | I am confident in achieving my work goals |
| Interpersonal Relationship Adaptation | I sometimes feel be misfits with my surroundings |
| | I feel a lot of pressure at work |
| | I feel at a loss about the relationships around me |
| | I can resolve conflicts with others |
| Occupational Cognitive Adaptation | I have clear career goals and career plans |
| | I am often confused about my work and prospects |
| | I often have the idea of changing my job |
| | I am often tired of my work |
| Occupational Objective Environment Adaptation | Income is hard to meet the needs of an ideal life |
| | Working environment and conditions is unsatisfactory |
| | I am unable to adapt to the climate, customs and etc. of the location of the unit |
| | Career stability is too bad, I have no sense of security |

## References Références Referencias


1. Xiao Gan.2014.Investigation Analysis and Educational Enlightenment on the Phenomenon of Frequent Job Hopping of College Students' Employees in the Period of Occupational Adaptation. Research on Chinese Youth, 3:84-88, 83.
2. Fang Li-luo. 2001. Professional Psychology and Successful Job Hunting. Beijing: Mechanical Industry Press.
3. Dai Rui. 2002. New Teachers' Maladjustment and its Prevention. Educational exploration, 4:95-97.
4. Pan Zi-ying.2013.On the study of occupational adaptability. Research on Continuing Education, 11:134-140.
5. Veenman S. 1984. Perceived Problems of Beginning Teachers. Review of Educational Research, 54(2):143-178.
6. Yuan Fang, Yao Yu-qun, Chen Yu.1992. Labor Sociology. Beijing: China Labor press.
7. Chen Hui-chang. 1999. A Study on the Personality Psychology of Students in the Period of Moral Education. Beijing: Chinese press.
8. Campell J P.1990. Modeling the Performance Prediction Problem in Industrial and Organizational Psychology. Palo Alto CA: Consulting Psychologists Press.
9. Huebner R A, Emery L J, Shordike A. 2002. The Adolescent Role Assessment: Psychometric Properties and Theoretical Usefulness. American Journal of Occupational Therapy, 2:34-67.
10. Savickas M L, Porfeli E J. 2012. Career Adaptabilities Scale: Construction, Reliability, and Measurement Equivalence Across 13 Countries. Journal of Vocational Behavior, 50:661-673.
11. Wang Qi. 2018. A Study on the Relationship between Organizational Support and Job




© 2019 Global Journals

Satisfaction of Teachers in Higher Vocational Colleges: the Mediation of Occupation Adaptation. Research on Higher Education in China, 9:104-108.
12. Yin Yu-xin. 2015. A Study on the Relationship between Social and Economic Status and New Teachers' Entry Adaptation. Journal of the State Education Administration College, 9:77-83.
13. Tang Xue-mei. 2009. A Study on the Occupational Adaptability of Postgraduates: Take Chengdu University graduates as an example. Chengdu: Southwest Jiaotong University.
14. Nunnally J C. 1978. Psychometric Theory. New York: McGraw-Hill.
15. Liu Jie. 2002. Professionalization: Teachers Challenging the 21st Century.Beijing: Education Science Press.



© 2019 Global Journals

This page is intentionally left blank

© 2019 Global Journals

Global Journal of human-social science: G
Linguistics & Education
Volume 19 Issue 10 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-460X & Print ISSN: 0975-587X

# Does the MS Spell Checker Effectively Correct Non-Native English Writers' Errors? A Case Study of Saudi University Students

By Nasser Alasmari & Nourah Alamri

*University of Jedda*

*Abstract-* Those learning English as a second or foreign language use spell checkers to correct the mistakes and errors they may have made while typing texts on a computer. However, scholars have debated the effectiveness of such checkers, which were originally designed to fix the spelling mistakes of native speakers. An example of these checkers is the Microsoft (MS) Word program, which constitutes the focus of the current study. This study examined how MS Word treats misspellings made by Saudi learners of English as a foreign language. It specifically addressed three research questions: (1) which L2 spelling errors were successfully fixed by MS Word; (2) which L2 spelling errors were unsuccessfully fixed by MS Word; and (3) how did intermediate L2 learners respond to alternative corrections provided by MS Word. A screen-tracking software, Screencast-O-Matic, was used to monitor the MS Word spell checker's treatment of misspelled words. It was also used to track learners' reactions to alternative corrections provided by MS Word in real time. The study analysed 401 errors made by25 female intermediate-level English learners at a Saudi university.

*Keywords: MS word spell checker, errors, mistakes, treatment, corrections.*

*GJHSS-G Classification: FOR Code: 139999*




*Strictly as per the compliance and regulations of:*

© 2019. Nasser Alasmari & Nourah Alamri. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

# Does the MS Spell Checker Effectively Correct Non-Native English Writers' Errors? A Case Study of Saudi University Students

Nasser Alasmari [α] & Nourah Alamri [σ]

*Abstract-* Those learning English as a second or foreign language use spell checkers to correct the mistakes and errors they may have made while typing texts on a computer. However, scholars have debated the effectiveness of such checkers, which were originally designed to fix the spelling mistakes of native speakers. An example of these checkers is the Microsoft (MS) Word program, which constitutes the focus of the current study. This study examined how MS Word treats misspellings made by Saudi learners of English as a foreign language. It specifically addressed three research questions: (1) which L2 spelling errors were successfully fixed by MS Word; (2) which L2 spelling errors were unsuccessfully fixed by MS Word; and (3) how did intermediate L2 learners respond to alternative corrections provided by MS Word. A screen-tracking software, Screencast-O-Matic, was used to monitor the MS Word spell checker's treatment of misspelled words. It was also used to track learners' reactions to alternative corrections provided by MS Word in real time. The study analysed 401 errors made by25 female intermediate-level English learners at a Saudi university. Results demonstrated that MS Word 2013 was 79.2% effective in correcting misspellings by intermediate second language learners of English. However, it provided incorrect suggestions for 15.3% of misspelled words and failed to provide a list of suggestions for 5.5% of misspelled words. The results also revealed that certain factors determined the success rate of the MS Word 2013 spell checker and that participants interacted with the spell checker in six different ways.

*Keywords: MS word spell checker, errors, mistakes, treatment, corrections.*

## I. Introduction

Word-processing software is used for writing and editing documents on computers. It provides users with the necessary tools to check spelling, create letters and add graphics to produce an improved piece of writing (Beal, 2016). MS Word is one of the most well-known word-processing software programs and was initially launched in 1983. Its spell checker was first installed in 1995 and has, since then, been updated numerous times (Janssen, 2013).

As its name suggests, the MS Word spell checker was designed to correct English language users' mistakes by placing a wavy red line under misspelled words to indicate a spelling error (Writing Enhancement Software Review, 2013). After identifying an error, the spell checker typically provides possible alternatives to correct the misspelled word (Pedler, 2001). The spell checker helps correct performance misspellings and errors that involve a 'failure to utilize a known system correctly' in equal measure (Corder, 1975, p. 204). Misspellings were expected to result from inattention, fatigue or motor coordination problems (Rimrott, 2005). Performance errors were considered 'accidental, unsystematic, and self-corrigible' (p. 26). In fact, Corder (1967) suggested that performance errors should be called *mistakes* rather than errors (p. 167).

According to Heift and Rimrott (2005), spell checkers are commonly used among second language learners even though they were originally designed to correct accidental spelling mistakes made by native speakers. This popularity is attributed to second language learners' limited ability to correct misspelled words. However, Rimrott (2005) has argued that the MS Word spell checker is not necessarily effective for those learning English as a foreign language and reported that it is meant to correct a misspelled word that contained a minimal deviation from the target word, such as single letter omission, addition, substitution and/or reversal. Most of the errors made by foreign learners of English, on the other hand, demonstrated a greater deviation from the correct word due to insufficient proficiency in the target language. Such spelling errors were considered competence errors, which are conceptualized as errors that involve 'misconceptions of target language forms and are due to a lack of linguistic knowledge on the part of the writer. They are systematic and/or non-self-corrigible and/or deliberate (in the sense that erroneous form is assumed to be correct)' (Rimrott, 2005, p. 26). Many scholars have emphasized the distinction between mistakes and errors where the latter term refers to 'the systematic errors of the learner from which we are able to reconstruct his knowledge of the language to date, i.e., his traditional competence' (Corder, 1967, p. 167).

In the context of spell checkers, errors and the corrections of those errors have additional classifications. An error could be a non-word error, which simply means a misspelled word that has no meaning (Chaudhuri & Samanta, 2013, p. 211) or a real word error, which is 'meaningful but not the intended word in the context of the sentence' (p. 211). Spell checkers can correct misspellings, but, in certain cases,

*Author α σ: University of Jedda. e-mails: nsalasmari@uj.edu.sa, naalamri@uj.edu.sa*



© 2019 Global Journals

the intended correct word may not be on the list of alternatives provided through the checkers' software. In such cases, the spell checkers do not successfully correct a misspelling. Therefore, a successfully corrected error occurs 'when spell checker detects a misspelling and provides the intended target word in its list of correction alternatives' (Rimrott, 2005, p. 71). The operations that spell checkers apply to correct a misspelling are referred to as the edit distance, which is defined by Antonsen (2012) as 'the number of operations applied to the characters of a string: deletion, insertion, substitution, and transposition' (p. 3).

According to Kukich (1992), most misspellings committed by native speakers are successfully handled by spell checkers. However, this may not be the case for non-native speakers of English given the relatively larger number of mistakes and errors these subjects may commit. This justifies the conduct of this research, whose main objective is to assess the effectiveness of the MS Word spell checker for Saudi learners as non-native speakers of English.

*a) Research Objectives*

Cowanetal. (2003, as cited in Rimrott, 2005) alluded to the importance of 'basing the selection of errors to be targeted for correction research on empirical data,' to obtain 'many examples of error types that can be built into the CALL program' (p. 455). Accordingly, the focus of this study is to observe the occurrence of spelling errors in L2 writing and meet the following objectives: 1) to enhance the understanding of the most commonly used spell checker, which is MS Word; 2) to deepen language instructors' understanding of learner interactions with or reactions to common spell checkers and 3) to add to the existing literature concerning L2 writing pedagogy as far as spell checkers are concerned.

*b) Statement of the Problem*

Microsoft Word is readily available, affordable and easy to use. One limitation, as previously indicated, is that the MS Word spell checker was designed to correct mistakes made by native speakers of English. Hieft and Rimrott (2005) predicted that spell checkers of word processors like MS Word would possibly be ineffective while fixing non-native misspellings. Furthermore, Al Jarf (2010) found that the spelling errors of Arab learners of English were both complex and systematic. Therefore, an assessment of the effectiveness of the most widely used spell checker, MS Word, is necessary. Equally as important is a full review of L2 learners' actual interactions with MS Word, which will allow researchers to fully understand the strengths learners have, the challenges learners face while using a word processing program and how to best gear research and instruction towards any identified areas of weakness.

*c) Purpose of the Study*

The types of misspellings produced by L2 learners are typically different from errors produced by native speakers (Al Jarf, 2010; Hovermale, 2010; Okada, 2005). Al Jarf (2010) reported that L2 learners of English made multiple-error misspellings. A large number of multiple-edit errors within non-native learner spellings was found to cause a low correction rate in MS Word 2003 (Rimrott, 2005). The current study evaluates the effectiveness of a more recent edition of the spell checker in MS Word 2013. This study's primary aim was to assess the effectiveness of the MS Word spell checker regarding its successful and failed alterations of L2 spelling errors made by Saudi intermediate-level learners of English at a Saudi university. In addition, it investigates Saudi learners' responses to MS Word lists of alternative corrections and uses this information to inform future research directions in word-processing design and enhance teaching practices of L2 writing using word processors.

## II. Literature Review

*a) Spelling Error Classification Systems*

The spelling errors made by adult L2 learners have different patterns than those made by native speakers. Several studies investigated the kinds of errors made by learners of foreign languages and identified the processes involved in making spelling errors in English, the reasons for those errors, the spelling challenges foreign language learners (specifically Arabs) face and the placement of those errors (Alhaisoni, Al-Zuoud, & Gaudel, 2015; Al-Jabri, 2006; Al Jarf, 2005, 2010; Al-Ta'ani, 2006; Bestgen & Granger, 2011; Dixon, Zhao, & Joshi, 2010; Emery, 2005; Fender, 2008; Figueredo & Varnhagen, 2004; Heift & Rimrott, 2005, 2008; He & Wang, 2009; Rimrott, 2005).

Emery (2005), for example, found that Arab learners made spelling errors due to vowels more often than consonants. She classified Arab learners' misspellings and identified the sources of those errors. Spelling errors were collected from 640 papers written by the 32 trainees over a period of six months. In total, 545 errors were recorded. Errors were classified as a single error, a combination of errors or a complex error. She also identified two different types of spelling errors: errors that were clearly'n on-words' and those that were 'real word errors'. The results of the study demonstrated that most of the recorded spelling errors were vowel-related, as they constituted 83% of the errors, while only 17% of the errors involved consonants. Emery (2005) attributed the kinds of errors committed by the Arab learners to their inadequate knowledge of English spelling conventions. A possible reason for this tendency has been identified as the irregular nature of the English spelling system.



© 2019 Global Journals

To understand more complex errors, Al-Ta'ani (2006), on the other hand, studied spelling errors made by English composition students at the secondary level in the United Arab Emirates. The study sample consisted of 200 randomly selected students during the academic year 2003–2004. The findings of the study demonstrated that: a) vowels and silent letters were the most problematic areas; b) the most frequent errors occurred in the middle of misspelled words; c) very few errors were made in the area of derivations and d) morphemic errors, and inflections in particular, were the most predominant.

Al Jarf (2010) went on to discuss the spelling error processes mentioned in Emery's (2005) work, such as omission, substitution, addition and/or transposition, in her analysis of misspelled words by Saudi English learners. She analysed a large number of spelling errors found in handwritten essays, paragraphs, tests and texts that had been translated from Arabic to English. These texts had been written by female Saudi university students from different levels and majors. She reported that L2 English learners usually made multiple-edit misspellings, where, within a single word, there would be more than two errors. She classified spelling errors into three categories. The first was whole-word errors, which were substituted by an extraneous word or which deviated partially/completely from the target word, such as **Luteroture ~ Literature*. The second was faulty graphemes, where single or multiple errors were found within one word due to deletion, addition or substitution, such as **aspechely ~ specially*. The third was faulty phonemes, in which the misspelled word did not sound like the target word due to a consonant, vowel, syllable, prefix, suffix, grapheme, grapheme cluster deletion, substitution or addition, such as **rember* or **member* for *remember*. The same author reported that these spelling problems could be further classified into phonological and orthographic problems. The former are errors in which the misspelled word does not sound like the target word because the word, consonant, vowel, syllable, prefix, suffix, grapheme or grapheme cluster is not heard at all, misheard, added or reversed with another. The latter refer to instances in which the misspelled word sounds like the target word but the written form or grapheme used for the misspelled portion does not correspond to the target word or target grapheme.

To explain the reasons for these committed errors, Al Jarf (2010) claimed that English learners use spelling strategies or mental processes to represent spoken sounds in written symbols. The spelling strategies that these learners used while committing a misspelling can be classified into the categories of reversal, insertion, substitution and omission. Reversal strategy is when the learner reverses the order of two target words, two vowels, two consonants or a vowel and a consonant within the target word. Substitution is when the learner substitutes a word for another real word, invents a word, substitutes a vowel with one or more vowels, substitutes a consonant with one or more consonants or substitutes a syllable or a suffix for another. Al Jarf (2010) considered the morphological errors of deleting or adding a prefix and/or suffix to be a phonological error problem. She indicated that one of the reasons for committing errors in English spelling was the Arabic language itself, which has a one-to-one correspondence between phoneme and form. Arab learners generally misspell English words that have a non-phonetic spelling. Some English sounds do not exist in Arabic, such as /p/ and /v/. According to Smart and Altorfer (2003), Arabic speakers tend to transcribe these sounds as /b/ and /f/, respectively.

A study similar to Al Jarf's (2010) was conducted by Alhaisoni, Al-Zuoud and Gaudel (2015). They collected data from written samples of 122 male and female students enrolled in an intensive English language program during their preparatory year at the University of Hail in Saudi Arabia. The participants were asked to write a well-organized essay (150 to 300 words) on one of four familiar topics. Several procedures were used to analyse the data. Alhaisoni et al. (2015) identified intra-lingual errors within the English language—the target language of the participants. The onset of these error types was mainly accounted for through articulation and spelling anomalies inherent in English words themselves. In addition, participants had a habit of manipulating the standard pronunciations of words, which resulted in incorrect spellings. When they examined the sources of these errors in this study, it was assumed that such errors might be attributed to the participants' attempt to construct a word based on their knowledge of grapheme-phoneme relationships. For example, Alhaisoni et al. clarified that silent letters presented problems for the participants when guessing the accurate spelling of target words. For example, this can be seen in the spelling of *country* which phonetically calls for the omitting of the *u* as in **contry*. Many learners chose to omit the silent vowel *u* while writing because it was not articulated.

*a) Efficacy of Spell Checkers in Word Processors*

Several researchers have suggested that spell checkers in word processors used by L2 users should be adapted to the patterns of errors that characterize each native language (L1) using a study of the patterns of interference and influence from the L1 to the L2 (Bestgen & Granger, 2011; Hovermale, 2010; Mitton, 1996; Mitton & Okada, 2007; Rimrott & Heift, 2005, 2008). Due to its wide and global use, the efficacy of MS Word's spell checker has been of interest to L2 researchers. Some studies have developed prototype spell checkers and compared their performances with that of MS Word (e.g., Chaudhuri & Samanta, 2013; Flor & Futagi, 2012; Sahrir, 2015).



© 2019 Global Journals

While evaluating the efficacy of the MS Word 2003 spell checker, Heift and Rimrott (2005) found that it detected and corrected 178 errors (52.2%), detected but did not correct 107 errors (31.4%) and did not detect 56 errors (16.4%) out of a total of 341 errors. Table 1 shows the performance of MS Word 2003 in each category.

*Table 1:* Efficacy of MS Word 2003 in Treating L2 Misspellings (Heift & Rimrott, 2005)

| Category | Corrected errors | Uncorrected errors | Undetected errors | Total |
|---|---|---|---|---|
| Single error violation | 172 | 82 | 56 | 310 |
| Multiple errors violation | 6 | 25 | 0 | 31 |
| | | | | |
| Total | 178 (52.2%) | 107 (31.4%) | 56 (16.4%) | 341 |

Heift and Rimrott found the distribution of participants' misspellings to be 70 (20.5%) performance single error violations, 240 (70.3%) competence single error violations, 6 (1.8%) performance and competence multiple error violations and 25 (7.3%) competence multiple errors violations. MS Word 2003 spell checker's performance in these categories is summarized in Table 2 below.

*Table 2:* Performance and Competence Errors in MS Word 2003 (Heift & Rimrott, 2005)

| Category | Corrected | Uncorrected | Undetected | Total |
|---|---|---|---|---|
| Performance | 48 (14.2%) | 10 (2.9%) | 12 (3.5%) | 70 (20.5%) |
| Competence | 128 (37.5%) | 93 (27.3%) | 44 (12.9%) | 265 (77.7%) |
| Performance & Competence | 2 (0.6%) | 4 (1.2%) | 0 | 6 (1.7%) |
| Total | 178 (52.2%) | 107 (31.4%) | 56 (16.4%) | 341 |

The researchers concluded that the MS Word 2003 spell checker was much more successful at correcting performance rather than competence errors because, in the case of competence errors, the misspelled words deviated much more from the target words. This made it more difficult for the MS Word spell checker to correct them. In 2008, Heift and Rimrott replicated their study using the same taxonomy and found that only 62% of learners' misspellings were corrected. In addition, they found that the MS Word 2003 spell checker, independent of other factors, generally could not correct multiple-edit misspellings, although it was quite successful in correcting single-edit errors.

In a recent study, Lawley (2016) investigated whether a spell checker was effective at detecting errors and providing appropriate feedback especially regarding elementary- and intermediate-level learners of English at the Universidad Nacional de Educacion a Distancia (UNED) in Spain. In comparison to the widely used MS Word spell checker, the author considered the extent to which explanatory pedagogic feedback could be provided. The initial data for the prototype pedagogical spell checker (PPSC) was taken from a corpus of 160,000 words that consisted of compositions written by UNED students at elementary- and intermediate-levels. The students' compositions were passed through the MS Word spell checker to discover which words in the compositions were not in the spell checker's database. Certain spelling mistakes not detected by MS Word, such as *to* when *too* would have been correct, were not collected. The proper names of people and places were excluded.

A test was carried out to see the PPSC's responses to spelling mistakes in students' compositions. Its performance was compared to that of an experienced teacher on one hand and the MS Word spell checker on the other. To test the PPSC, Lawley used a new corpus of 20 compositions written by 20 Spanish-speaking UNED students of EFL at levels A2 (elementary), B1 (intermediate) and B2 (upper intermediate). The small corpus contained a total of 2,648 words. An experienced teacher detected a total of 35 spelling mistakes across the 20 compositions and, in each case, provided a suggested replacement word. The compositions were then analysed by the spell checker in MS Word. MS Word detected 31 of the 35 mistakes found by the teacher but failed to detect four words. In 18 of the 31 cases, the target words occupied the first position on the list of suggested alternatives. For six misspellings, the target words occupied lower positions on the list of suggested alternatives, and, for seven misspelled words, the target words did not appear on the list of suggested alternatives. For five errors, MS Word automatically corrected or allowed an alternative word (not necessarily the target word) to be incorporated with the click of a mouse.

The compositions were then analysed by the PPSC. In all 35 cases, the spelling mistakes detected by the teacher were also detected by the PPSC. In no



© 2019 Global Journals

cases did the PPSC offer an inappropriate alternative word. The MS Word spell checker, on the other hand, was only instantly successful (target word in the first position) 58% of the time or in the 18 cases in which the target correction appeared in the first position on the list of suggested alternatives. The PPSC, however, detected all errors and never encouraged the user to replace them with incorrect words. It is important to note that, at this stage, the PPSC was not tested in practice on L2 learners.

During a group session, the 10 participants were asked two questions: how they normally detected spelling mistakes when writing in English and whether they would prefer to use the PPSC. All 10 participants said that they used MS Word's spell checker but would prefer to use the PPSC. They liked the way the PPSC drew their attention to the spelling patterns of English in same manner as, according to one participant, 'a good teacher should.' They also liked the fact that it detected some grammatical and lexical mistakes in their writing. Lawley (2016) concluded that the PPSC detected more L2 spelling mistakes than MS Word, and it did not offer incorrect alternatives. MS Word, on the other hand, was not intended as a teaching aid for L2 learners and instead works well for competent writers who have primarily made accidental spelling mistakes.

Chaudhuri and Samanta (2013) reported that, for errors occurring in two positions within a word, the spell checkers work well. However, the problem of real-word errors is more complex. Some errors disturb the syntax and semantics of the entire sentence, which then requires a human being to detect them. An automatic syntactic or semantic analysis of a correct sentence was in itself a difficult task, and the analysis of an incorrect sentence was nearly impossible in most cases.

In a separate attempt to enhance generic spell checkers for non-native speakers, Sahrir (2015) developed a spell checker prototype to correct errors in the Arabic language made by non-Arabic speakers. The program was specifically designed to identify and correct morphological errors by using the MS Word program via a special font known as 'Modaqqeeq Sarfiy' (morphological checker). The research population was 24 students who were taking ARAB 2124 in the first semester of the 2013–2014 academic year. The researcher requested that each of the participants write a one-page article relating to computer-assisted language learning in the Arabic language. An analysis was then conducted to investigate the frequency and type of language errors found in their articles. The concept of using fonts to computationally make spelling corrections was adopted in the wording code of some of the spelling rules that appeared in Arabic books as well as in research and literature concerned with common spelling errors (such as *The Methods of Operation for the Treatment of Spelling Errors* by Rashid bin Mohammed al-Shalan). The first version of this prototype was found to be less successful in correcting errors. When asked about the prototype, the participants indicated some strengths and weaknesses. The results and findings indicated the obvious need for this spell checker prototype and its acceptance by users. Sahrir still concluded that the spell checker prototype required improvement.

## III. Learner Perceptions and Interactions with the MS Word Spell Checker

Recently, research done in the context of the MS Word spell checker has placed an emphasis on L2 learners themselves rather than on their spelling errors alone. Godolakis (2014) evaluated the didactic use of spelling and grammar checkers in texts by Swedish learners of Spanish at an upper-secondary school. Four students participated in the study. The participants were given a series of pictures and then asked to describe a journey to Italy in detail using the pictures and with no time limit. They used a program that had no tools for detecting or correcting language errors. Then, they posted their original texts in MS Word 2010 and were asked to revise their texts using spelling and grammar checkers. Student performance was recorded using a special program called Screencast-O-Matic, which analysed the performance of MS Word 2010 and how the participants reacted to the feedback it provided. Godolakis adapted Rimrott and Heift's (2005) classification of errors. She classified the 91 spelling errors into those resulting from performance (50 errors) and those resulting from competence (41 errors). She found that the MS Word spell checker was successful at detecting and correcting 84% of the performance errors. As for competence errors, 39 out of 41 were detected (95%), but only 12 were corrected (29%). This means that 66% of the competence errors detected were left uncorrected.

Overall, MS Word detected 88 of the 91 errors (96.7%) but only corrected 54 errors (59.3%). Upon reviewing how participants arrived at corrections, the study found that they chose from the lists provided by the MS Word spell checker in 78 cases (88.6%). In 50 of those cases (64.1%), participants chose the correct word from the list provided. In 47 of the same cases (60.3%), the target word was found in the first position on the list. In 28 of the cases (35.9%), the participants chose an incorrect word from the list provided by the MS Word spell checker. In 19 of those 28 cases (67.9%), they chose the first word on the list. In general, and in 66 of the cases (84.6%), the participants chose the first word on the list provided. This indicated a general tendency among participants to choose the first word provided by the MS Word spell checker.

The study highlighted the beneficial role played by the MS Word spelling tool, which increased in



© 2019 Global Journals

efficacy when its user's proficiency increased. This increase occurred when it came to both errors detected and how to make use of the feedback provided. Therefore, the proficiency levels of the learners seemed to affect the success of the MS Word spell checker, as more proficient users made fewer mistakes. The participants were asked to evaluate the MS Word spell checker using a Likert scale. The results demonstrated that participants generally trusted the ability of the spell checker. However, the study did not reveal how participants interacted with the MS Word spell checker in cases where it failed to correct their errors.

Few studies have touched upon the effectiveness of spell checkers apart from MS Word, and even fewer have evaluated these spell checkers in their handling of misspellings by L2 learners. These studies (Holmes & de Moras, 1997; Burston, 1998; Antonsen, 2012) demonstrated short comings in the ability of generic spell checkers to help non-native writers. However, the studies did not distinguish between different groups of language learners. Learner variables, such as learner proficiency in the target language, were not considered.

Although many programs were designed to fix non-native misspellings, very few of them were tested empirically to evaluate their treatment of L2 misspellings. Rimrott (2005) reported that an analysis and classification of errors was crucial to the evaluation and design of CALL programs, as has been emphasized by several researchers in the field (e.g., Bestgen & Granger, 2011; Heift & Rimrott, 2008, 2005; Ndiaye & Faltin, 2003; Rimrott, 2005).

MS word is a software program that is widely used by Saudi learners; therefore, it is relevant to assess its efficacy. To this end, the current work attempts to answer the following three questions:

1- What are the L2 misspellings that the MS Word spell checker successfully corrects?
2- What are the L2 misspellings that the MS Word spell checker fails to correct?
3- How do typical L2 learners interact with MS Word as they attempt to overcome misspellings?

## IV. Methodology

*a) Subjects*

Twenty-five female Saudi university students majoring in English in their senior year of a BA program participated in this study. Quota sampling was used to choose the participants; that is, participants were selected from a sample based on pre-specified characteristics, so the total population had the same distribution of characteristics assumed to exist in the population being studied (Babbie, 2007). The level of English proficiency in the sample was, in general, intermediate.

*b) Instruments*

The materials used in this study were a background questionnaire (Appendix A), versions 2013 and 2010 of MS Word, one essay typed by the participants (Appendix B), the Screencast-O-Matic program and an exit questionnaire (Appendix C). The background questionnaire was adapted from one given by Montrul (2012). It was originally designed to record the English-language background of Hispanic learners of English. An adaptation was used in this study to record participant level of exposure to English and the extent of their current communication abilities while using the English language. The questionnaire consisted of sections on family history, linguistic history, education and current level of linguistic proficiency. Essays were typed into MS Word 2010, the version installed in the university computer lab at the time the study was conducted. The prompt asked for a 400-word essay. The topics were provided by the researcher, were familiar to the participants and were somewhat controversial to motivate participants to write longer essays. Screencast-O-Matic (2014) was used to capture the writing process on the screen in real time. It is a one-click screen-capture recording software that operates on Windows or Mac computers. Godolakis (2014) used the same program to evaluate the effectiveness of grammar and spell checkers. The exit questionnaire was designed by the researcher to compare their participants' beliefs about their interactions with the MS Word spell checker with their actual real-time practices. It consisted of seven questions about the spell checker itself.

*c) Procedure*

The participants began by filling in the background questionnaire, which required five to ten minutes to complete. They then received instructions to type a 400-word essay. Each participant's writing session was captured by the program Screen cast-O-Matic. When they finished, the participants were asked to fill in the exit questionnaire. The researcher was present in the lab to ensure that participants were not making use of external aids, such as paper drafts or dictionary apps on their phones. The participants were instructed to produce a well-written essay, which would necessitate the use of the spell checker while writing. They were made aware that their writing sessions were being recorded and observed. They typed their essays directly onto Microsoft Word 2010 without draft paper. Each participant had two hours to write the essay.

*d) Data Analysis*

To answer the first two research questions, the researcher observed the recorded writing sessions of participants to identify types of misspellings and to tally their frequencies. Repetitions of the same error were counted as one error. Each essay was opened in MS Word 2013 to explore the spelling correction options



© 2019 Global Journals

offered by the latest available version of the program. To answer the third research question on learner interactions with the MS Word spell checker, the recorded sessions were observed a second time to note participant responses to suggestions provided by MS Word 2010 for every misspelling.

Misspelled words were operationalized as errors that constituted non-words and had no meaning. To answer the first research question on systematically made L2 misspellings, spelling errors in the data were classified into performance and competence errors. Performance errors were unsystematic, accidental and self-corrected, while competence errors were systematic and not self-corrected due to a lack of appropriate linguistic knowledge on the target language. These were classified into phonological, morphological and orthographic errors (Heift & Rimrott, 2005). Morphological errors occurred when the subject used the wrong inflection or derivation of a word (e.g., **pearsonly ~ personally*). Phonological misspellings were errors that could be attributed to the learner's pronunciation or an ambiguous grapheme-phoneme correspondence (Thome, 1987). Orthographical errors occurred when the misspelled word sounded like the written target word, but the written form or grapheme used for the misspelled part did not correspond to the target word or the target grapheme (Al Jarf, 2010).

## V. Results and Implications

*a) Spelling Errors MS Word Succeeded in Correcting*

The first research question asked: *What spelling errors made by Saudi learners of English did the Microsoft Word 2013spell checker succeed in correcting?* Participants made a total of 401 spelling errors. Sixteen (3.9%) of these errors were undetected by the MS Word 2013 spell checker because they were real English words, such as **car ~ care, *their ~ there* and **hem ~ him*.

Of the 385 remaining spelling errors, the MS Word 2013 spell checker corrected 305 misspelled words, which means that the spell checker was 79.2% effective in correcting L2 misspellings. Specifically, the MS Word 2013 spell checker succeeded in correcting 63 performance misspellings (20.7%) and 242 competence misspellings (79.3%). Of the 63 performance errors, seven resulted from addition, 10 from substitution, 39 from omission and seven from transposition, which makes omission the most successfully corrected performance error in the dataset. Such errors contained a single error that could be corrected by learners. Of the 242 competence errors, 10 were morphological, 98 were phonological and 134 were orthographical. Table 3 below shows the distribution of error types successfully treated by the MS Word 2013 spell checker.

*Table 3:* Distribution of Successfully Treated Misspelled Words by the MS Word 2013 Spell Checker

| Performance errors | | | | Competence errors | | |
|---|---|---|---|---|---|---|
| Addition | Substitution | Omission | Transposition | Morphological | Phonological | Orthographical |
| 7 | 10 | 39 | 7 | 10 | 98 | 134 |

*b) Spelling Errors MS Word Failed to Correct*

The second research question asked: *Which spelling errors made by Saudi learners of English did the MS Word 2013 spell checker fail to correct?* As previously indicated, 305 errors were successfully altered by MS Word 2013. This means that MS Word 2013 failed to correct 80 of the total 385 misspellings (20.8%). For 59 of those errors (15.3 %), the MS Word 2013 spell checker provided a list of alternatives, but the target word was not on the list. Twenty-one misspelled words (5.5 %) received no suggested alternatives and were only marked by the MS Word 2013 spell checker as spelling errors. Table 4 below shows the distribution of detected errors.

*Table 4:* Distribution of Misspelled Words Detected by the MS Word 2013 Spell Checker

| Target Word | Frequency | Percent |
|---|---|---|
| On list of alternatives | 305 | 79.2 |
| Not on list of alternatives | 59 | 15.3 |
| No list of alternatives provided | 21 | 5.5 |
| Total number of detected errors | 385 | 100 |

*c) Performance Errors Not Corrected by MS Word*

Only five of the errors MS Word 2013 failed to correct were performance errors. Two errors were due to substitution and three were due to omission. The substitution errors *Eith* and *Giid* contained single errors. Such errors could be due to fast typing. In the case of *Eith,* the *W* key is next to the *E* key on the keyboard. The same is true for *Giid*. The MS Word 2013 spell checker failed to correct these errors because they began with capital letters, which was observed while the participants were typing. The omission error *paer* contained a single error; *arranments* and *knowledable* had a deviation of two letters, *g* and *e*. These errors were all missing an essential consonant. They were



© 2019 Global Journals

classified as performance errors because the errors were self-corrigible (i.e., the learners could correct them by themselves).

*d) Competence Errors Not Corrected by MS Word*

Seventy-five of the 317 competence errors were not corrected by the MS Word 2013 spell checker. Of these, four were morphological (5.3%), 34 were phonological (45.3%) and 37 were orthographical (49.3%). These errors resulted from multi-edit misspellings, which may have negatively affected the effectiveness of MS Word 2013 in correcting them. Table 5 shows the distribution of competence errors that the MS Word spell checker failed to correct across error types.

*Table 5:* Distribution of Competence Errors Not Corrected by the MS Word Spell Checker

| Morphological | Phonological | Orthographical |
|---|---|---|
| 4 | 34 | 37 |

i. *Morphological Errors Not Corrected by MS Word*

The MS Word 2013 spell checker failed to correct four morphological errors (5.3%). The errors **pearsonly ~ personally* and **wrihn ~ writing* were the result of incorrect derivation and/or inflection of words. For example, **pearsonly* missed the adjectival infix *al* that is derived from *personal*. The addition of the vowel *a* in the root **pearsonly* may have caused the failure of the MS Word 2013 spell checker to provide the target word in the suggested list of alternative words. The MS Word spell checker treated this error as two words: *pears only* and *pear sonly*. On the other hand, **wrihn* was deficiently inflected. The participant missed the *i* and *g* of *-ing.* If the word had been inflected correctly as **wrihing*, the MS Word 2013 spell checker would have provided the target word on the suggested list of alternatives.

ii. *Phonological Errors Not Corrected by MS Word*

The MS Word 2013 spell checker failed to correct 34 phonological misspellings (45.3%). The non-phonetic and arbitrary nature of English spelling (Ibrahim, 1978) may have resulted in these errors, such as **inkurge ~ encourage* and **inqurge ~ encourage.* The participants were attempting to imitate the sounds of the target words, but they could not distinguish between the vowel sounds /e/ and /i/ in the initial position. In the case of *encourage,* the phoneme /k/ had a different representation orthographically. It could be represented as *k, q, c* or *ck.* This led participants to represent the sound /k/ in *encourage* with a *k* as in **inkurge,* or with a *q* as in **inqurge.* The MS Word 2013 spell checker attempted to correct these errors by considering the first syllable of the misspelled words *in* with the second syllable and then with third syllable and so forth, suggesting words for**inkurge* such as *ink urge, incurve, inure* and *injure.* For misspellings to be successfully corrected by the MS Word 2013 spell checker, learners could make no more than one error in each syllable or, in multisyllabic words, two errors in one syllable. MS Word 2013 could then suggest lists of correctly spelled alternatives that contained the target word.

iii. *Orthographical Errors Not Corrected by MS Word*

The MS Word 2013 spell checker failed to correct 37 orthographical misspellings (49.3%). Instances of orthographical errors included **takecair ~ take care, *exllent ~ excellent* and **oneparatory ~ one preparatory.* In the first case, there was an incorrect word division, an addition of the vowel *i* and a deletion of the silent vowel *e*. In the case of **exllent,* there was a deletion of the first part of the second syllable *ce*. The MS Word 2013 spell checker considered the first syllable of the misspelled words *ex* with the second syllable and then with the third syllable and so forth, suggesting words such as *explant, exeunt, eluent* and *explants.* TheMS Word 2013 spell checker treated **takecair* as two separatewords: *take* and *air.Air* was closer than *care* in correcting **takecair*. However, when the misspelled word was split into two words, *take* and **cair,* theMS Word 2013 spell checker provided a suggested list that contained the target word, *care*, and the incorrect suggestion, *air.*

*e) Determinants of the MS Word Spell Checker's Successes and Failures*

A holistic assessment of the MS Word 2013 spell checker's performance showed that certain factors affected its efficacy. The first factor was the type of the error. Performance errors of adding, deleting, substituting or/and transporting certain letters could cause failure. For example, in the case of **paer~ paper*, omitting the letter *p* made it difficult for the MS Word spell checker to provide a suggested list containing the target word because MS Word could only recognize **paer* as *pear, pare, pair, pier* or *peer.* The same was true for **safeing~ saving* in which substituting the letter *v* for *f* caused the MS Word spell checker to recognize the misspelled word as *seeing, staffing, sifting, sailing* or *snafuing* but not as *saving*.TheMS Word spell checker also failed to provide suggested lists for words such as **enkowlige~ knowledge* and **sernerval~ several* due to the addition of the letter *e* in the first case and the transposition of the letter *v* in the second.

The second factor in determining the success of the MS Word 2013 spell checker was capitalization.



© 2019 Global Journals

Capitalizing the first letter of the misspelled word may have affected its efficacy. The MS Word spell checker could not provide suggested lists that contained the target words for misspellings, such as in the case of **Eith~ With* and **Giid~ Good*, due to the capitalization of the first letters. One possible reason for this failure was that the MS Word spell checker treated these misspelled words as proper nouns, as all alternative suggestions began with capital letters such as *Edith, Eighth, Either, Keith* and *Leith* for **Eith* and *Gide, Gild, Gird, Grid* and *Giada* for **Giid*. However, when the letter was lowercase, the MS Word spell checker provided suggested lists that contained the target words *with* and *good*.

*f) Participant Interaction with Misspelled Words While Using MS Word 2013*

The third research questions asked: *How did intermediate-level Saudi learners of English respond to the alternative corrections provided by the spell checker?* Observations of the recorded sessions of participants using MS Word 2010 revealed that the participants had six reactions when misspelled words were flagged. First, the most predominant tendency was for the participants to select a word from the suggested list of alternatives. Faced with a misspelled word, 24 out of 25 participants (96%) used the suggested list provided by MS Word 2010 to view whether the target word was listed. They chose the target word correctly 61% of the time.

Second, participants sought assistance from the Internet. When participants could not correct the spelling of a word by themselves or were doubtful of the suggestions given by the MS Word 2010 spell checker, they resorted to a search engine such as Google to check the spelling or meaning of a word 16.4% of the time. Participants used Google Translate and online dictionaries, such as the Oxford and Merriam-Webster, as well as online thesauruses. One participant used Google Translate to correct the spellings and check the meanings of all the words in her essay. Another participant used studies in the form of PDF documents and articles published online to copy and paste certain words into her essay she was unable to spell, such as *imitates, assessment* and *intimidated.* The same participant used the King Saud Library online to gain access to articles and studies related to her essay topic. Third, when participants saw a misspelled word with a wavy line underneath, they changed the places of letters, substituted letters with others or added/deleted letters until the MS Word 2010 spell checker corrected the word or provided a suggested list of alternatives. Participants used this technique 13.6% of the time. Fourth, participants chose incorrectly from the suggested list of alternatives 6.0% of the time, even though, in some cases, the target words were available in the suggested list of alternatives (e.g., *palace* instead of *place*, *proses* instead of *process* and *spurted* instead of *supported*). Fifth, participants replaced a misspelled word with a synonym or a word similar to the intended word 1.5% of the time (e.g., replacing **exlent ~ excellent* with *very good* and **sernerval ~* with *some)*. Sixth, participants rechecked words selected from the suggested list. They rechecked the spelling of chosen words, collocations or their suitability within the context through one final quick reading in which they moved the arrow over the words 0.9% of the time. Frequencies of learner interactions with the MS Word 2010 spell checker are listed in Table 6.

*Table 6:* Participant Interactions with MS Word 2010 When Misspellings Were Flagged

| Learner Interaction | Frequency | Percent |
|---|---|---|
| Chose the target word from the suggested list | 326 | 61.5% |
| Sought assistance from the Internet | 87 | 16.4% |
| Changed letters until Word recognized the misspelling | 72 | 13.6% |
| Chose incorrectly from the suggested list | 32 | 6.0% |
| Replaced the target word with another | 8 | 1.5% |
| Rechecked the corrected words | 5 | 0.9% |
| Total | 530 | 100% |

Results from the exit questionnaire confirmed that all participants were familiar with MS Word and used it for typing documents. In addition, participant perceptions on their interactions with the MS Word spell checker partially agreed with their real-time performance. The exit questionnaire shows that 60% of the sample reported that they used the spell checker to select the target word, 32% reported that they tried to correct misspelled words themselves and 8% reported that they did both. This was in line with the real-time observations of these participants using the spell checker in MS Word in 362 attempts (61.5%) and trying to correct misspelled words in 72 attempts (13.6%). Thirty-six percent reported they trusted the efficacy of MS Word spell checker to flag their spelling errors, while 64% reported no such trust. This suggests a learner awareness of the limitations of the MS Word spell checker. However, perceptions did not always match performance. When participants were asked about rechecking the spelling of words corrected by the spell checker, 64% percent reported that they did recheck or sometimes rechecked misspelled words once the MS



© 2019 Global Journals

Word spell checker had offered an alternative and 36% reported that they did not. In actuality, an attempt to recheck a corrected word occurred only five times out of 530 attempts or in 0.9% of the cases.

In addition, the exit questionnaire asked participants about spelling aids when the MS Word spell checker failed to provide corrections. Results showed that 68% of the participants reported seeking assistance from Google, 12% reported replacing the word, 8% reported using a dictionary and 4% reported that they would not seek further help. Results from real-time observations confirmed participant perceptions. Google was used in 87 attempts (16.4%), word replacement occurred in eight attempts (1.5%) and only one participant left three misspelled words without correction.

## VI. Discussion

This study confirmed the findings of previous researchers regarding the complex and systematic nature of L2 spelling errors. Just as Emery (2005), Al-Ta'ani (2006), Al Jarf (2010), Alhaisoni et al. (2015) and Heift and Rimrott (2005) observed, misspellings made by L2 learners in this study contained single and multiple errors and significant deviations from target words. The current dataset contained spelling problems like those identified by Emery (2005) and Al Jarf (2010). There were comparable sources of errors and strategies employed by learners, such as the occurrence of substitutions, additions, omissions and the transposition of letters to represent target words. There were also problems of interference from the L1 and problematic applications of L2 rules. The current dataset also fits Heift and Rimrott's (2005) observation that most L2 misspellings were errors, not mistakes. Participants in this study made more competence errors ($n$ = 317) than performance errors ($n$ = 68).

The study was premised on the fact that the MS Word spell checker was designed to address spelling errors made by native speakers of English. Rimrott (2005) stated that multiple-edit errors caused the MS Word 2003 spell checker to have a low correction rate, which prompted researchers to express concern that the spell-checking feature in word processors like MS Word would be ineffective in fixing non-native misspellings (Bestgen & Granger, 2011; Heift & Rimrott, 2005). However, in this study, the MS Word 2013 spell checker was found to be 79.2% effective at providing intermediate second language learners with their target spelling. The success rate of this was 52.2% in Heift and Rimrott's 2005 work and 62% in Heift and Rimrott's 2008 work. Heift and Rimrott (2005) found that the MS Word 2003 spell checker had a 31.4% rate of uncorrected misspellings and a 16.4% rate of undetected misspellings. However, the current study found that MS Word 2013 demonstrated a better performance and had a reduced rate of 20.8% uncorrected misspellings and 3.8% undetected misspellings. These findings suggest that the MS Word spell checker improved in later versions at addressing L2 misspellings. For example, Godolakis (2014) in her more recent assessment of MS Word 2010, found that the program was 85% effective regarding performance errors and 29% effective regarding competence errors in a sample of only four L2 learners. In this study, with a sample of 25 L2 learners, MS Word 2013 was found to be 92.6% effective regarding performance errors, correcting 63 out of 68 errors, and 76.3% effective regarding competence errors, correcting 242 out of 317 errors.

As for the failure of MS Word 2013 to correctly address L2 misspellings, in this study, the program failed to correct five performance errors. Heift and Rimrott (2005) found that the MS Word 2003 spell checker failed to correct 10 performance errors in single-error words. In addition, in this study, the MS Word 2013 spell checker failed to correct 75 competence errors of which none were lexical, four were morphological, 34 were phonological and 37 were orthographical. Heift and Rimrott (2005) found that MS Word 2003 failed to correct 116 competence errors of which 77 were lexical, 16 were morphological, 21 were phonological and two were orthographical. The discrepancy in numbers of lexical and orthographical errors was due to the modification made to the classification of errors in this study. Participants in this study did not make lexical errors, such as blending two distinct words. This could be attributed to the learners' intermediate level of proficiency. Rimrott (2005) found that intermediate level learners made fewer lexical errors than beginners. However, no such errors were found by Al Jarf (2010) who worked with the similar sample of Saudi learners of English.

Phonological errors could have resulted from inter-language transfer. Al Jarf (2010) explained that there is a one-to-one correspondence between phonemes (spoken sounds) and graphemes (written symbols) in the Arabic language, in which each consonant and each vowel has only one sound. English has no one-to-one correspondence between the sound and written form; therefore, spelling words as they sound can cause words to deviate from their target spelling. This makes it difficult for the MS Word spell checker to successfully correct them (Heift & Rimrott, 2005). The high number of orthographical errors, on the other hand, could be explained by the learners' ignorance of the correct spellings of words (e.g., **caunnuty ~ community*, **acuring ~ acquiring* and **acquestion ~ a question*). Al Jarf (2010) noted that ignorance of spelling rules could be a source of errors. Such errors cause deviations from the target spelling and therefore make it difficult for the MS Word spell checker to successfully correct the misspellings.



© 2019 Global Journals

Heift and Rimrott (2005) and Bestgen and Granger (2011) found that the MS Word spell checker encountered more difficulties correcting misspelled words with multiple errors. This was confirmed in the findings of this study in which most of the errors that the MS Word spell checker failed to correct were multi-edit competence errors.

Concerning the learners' interactions with the MS Word 2010 spell checker when an error occurred, Al Jarf (2010) reported that her students tended to transfer, substitute, delete or add letters as a strategy to represent the target words while writing. The participants in this study used the same strategies to correct errors while using MS Word 2010 but only 13.6 % of the time. They primarily relied on the MS Word spell checker; they selected the target word from the list of alternatives 61.5% of the time and they seldom (6% of the time) made the wrong choice. This tendency to benefit from the MS Word spell checker was also found by Godolakis (2014) who reported that participants chose the target word from the suggested list provided by MS Word 2010 64% of the time yet chose incorrect words from the suggested lists of alternatives 35.9% of the time.

Most participants in this study were selective in their interactions with the MS Word spell checker. They did not blindly choose from the list of alternatives. More importantly, they distinguished correct suggestions from incorrect ones. Participants made wrong choices from the suggested list in limited cases. This could be explained through the order of the words on the suggested list. Antonsen (2012) explained that, for L2 writers, the order in which the words appeared on the suggestion list seemed to influence the selection of one word over another. This matched the findings of Godolakis (2014), which suggested that learners trusted the spell checker but were aware of its limitations. However, Godolakis explained that, in the 50 cases during which the student chose the target word, 47 had the target word in the first position on the list provided by MS Word. In 28 cases, the students chose an incorrect word from the list provided by MS Word, and in 19 cases, the students chose the first word on the list. This highlights a general tendency among L2 learners to choose the first word provided by MS Word. The wavy red line marked by MS Word was still found to urge participants to correct their spelling errors even when the spell checker failed to correct them.

Data analysis also revealed possible factors that affected the performance of the MS Word spell checker while correcting L2 misspellings. One of the factors was a capitalization of the first letter. The MS Word spell checker treated these misspelled words as proper nouns, as all alternative suggestions began with capital letters. This could be the reason Flor and Futagi (2012) designed the system *ConSpell* to ignore capitalized words, such as *Riyadh*, and/or words in all uppercase, such as *LONDON*.

Chaudhuriand Samanta (2013) reported that, for errors occurring in two places within a word, generic spell checkers worked well. This study did not confirm such results in all cases. The results of this study showed that the MS Word spell checker corrected 17 out of 28 misspelled words with multiple instances of C+V errors. In short, for errors occurring in two places in a word, generic spell checkers may not always work well.

## VII. Limitations

Despite its relevance within the context in which it was carried out, this study involved several constraints that prevented its results from being generalized. First, the number of participants was limited to 25 female students. A larger number of university students would have yielded more reliable insights into the efficacy of the MS word spell checker, especially if a group of male students had been able to communicate their perceptions on the issue.

Second, writing competency is not only measured through the fixing of spelling errors committed by language learners. It may also be assessed through the extent to which these learners join words and sentences clearly and use appropriate functions to express meaning. MS Word also fixes structural problems such as these, but the scope of the current study could not cover all types of errors. These errors may be the focus of future studies.

## VIII. Conclusion

This study assessed misspellings made by 25 intermediate-level Arab learners of English. It highlighted features that aided and impeded the MS Word 2013 spell checker, which was found to be 79.2% effective in correcting misspellings by L2 learners. Uncorrected misspellings were largely due to multiple-edit errors in single syllables, which MS Word 2013 could not address. Performance errors were lower than competence errors in number and frequency due to the intermediate proficiency of the sample. Performance errors were mostly the result of substitution and omission. Most competence errors were phonological and orthographical errors, which were also the most challenging for the MS Word spell checker. They occurred because participants relied on their ears when typing (James &Klein, 1994). Arabic and English, to some extent, differ in phonology. The discrepancy between the written form and the sound of a word in English, as well as the arbitrary nature of English spelling, led participants to make more phonological and orthographical errors. The MS Word 2013 spell checker dealt with such errors either by failing to provide a suggested list or by suggesting a list that did not contain the target word.



© 2019 Global Journals

Although the MS Word 2013 spell checker was mostly effective, certain factors were observed to cause its failure. This study found that the type of error, capitalization of the initial letter of the misspelled word and the number and position of errors in single syllables hindered the MS Word 2013 spell checker's ability to correct misspelled words. MS Word attempted to correct misspellings by considering the first syllable of the misspelled word with the second syllable and then with third syllable and so forth. In some cases of multi-edit misspellings, the MS Word spell checker detected the misspelled word but failed to provide suggested alternatives.

This study focused on L2 learners' real-time responses to the MS Word spell checker's treatment of errors, especially alternative corrections offered by the program. Therefore, in addition to the field of second language writing and computer-assisted language learning (CALL), results of this work would provide insightful input to programmers of word processors, such as MS Word, to better accommodate a primary group of users, second language learners of English.

The current MS Word 2013 spell checker is effective in correcting 79.2% of learners' misspellings. Participants found the target word on lists of alternatives 61.5% of the time. This is reassuring, as learners could focus more on content and writing style rather than only on spelling. Furthermore, the wavy red line that appears under words in MS Word documents whenever a misspelling occurs alerts L2 learners to correct errors when needed.

The results of this study prompt several computational and pedagogical suggestions. The MS Word spell checker is not a learning tool, as stated by Helfrich and Music (2000). However, MS Word could be used to help learners improve their knowledge of English spellings. Most academic and professional work requires the skilled use of word processors. With little empirical analysis of popular spell checkers and their effectiveness regarding errors made by L2 learners, practical guidance in L2 writing classes may be lacking essential guidelines on how to best incorporate language assistance from word processors.

## Appendices

*Appendix A:* Background Questionnaire

**Note:**
This information will be kept confidential. Your name and contact information will be replaced with a numerical code after data collection.

Participant research ID number: _____ (To be filled in by researcher)

Name: _____

Level: _____ Age: _____

E-mail:_____

**I. Family History**

1. Where are your parents/caregivers from?

Mother: _____ Father: _____

2. What languages do your parents/caregivers speak?

Mother: _____ Father: _____

3. What do your parents do for a living?

Mother: _____ Father: _____

4. What is your parents' highest level of education? (Circle one for each)

**Mother** No formal education **Father** No formal education

Elementary school Elementary school



© 2019 Global Journals

| | |
|---|---|
| Middle school | Middle school |
| High school | High school |
| College | College |
| Grad school | Grad school |

## II. Linguistic History

5. At what age did you first begin to learn English?

6. Did you begin to speak English before age 5? (Circle one)

| | |
|---|---|
| Yes | No |

7. What languages did you hear in your home from birth to 5 years old? (Circle all those that apply)

| | | |
|---|---|---|
| Arabic | English | Other (specify) _____ |

8. What languages did your parents/caregivers use mostly when speaking to you?

| | | | |
|---|---|---|---|
| Arabic | English | Both | Other..... |

9. What languages did you use mostly when speaking to your parents/caregivers?

| | | | |
|---|---|---|---|
| Arabic | English | Both | Other..... |

10. Do you have siblings?

| | | | |
|---|---|---|---|
| Yes | No | How many? ..... | Are they older or younger?..... |

11. What language/s did you use when speaking with your siblings?

| | | | |
|---|---|---|---|
| Arabic | English | Both | Other..... |

12. Did grandparents live at home?

| | |
|---|---|
| Yes | No |

13. What language/s did your grandparents use when speaking to you?

| | | | |
|---|---|---|---|
| Arabic | English | Both | Other..... |

14. Where there other caregivers in the house (baby-sitter/ other family member)?

| | | |
|---|---|---|
| Yes | No | Who? |



© 2019 Global Journals

15. What language/s did your other caregiver use when speaking to you?

| Arabic | English | Both | Other..... |
|---|---|---|---|

16. Did you attend daycare or were you cared for at home before age 5?

| Daycare | Home with ..... |
|---|---|

17. What language were you spoken to when in day care/home care?

| Arabic | English | Both | Other ..... |
|---|---|---|---|

18. Did you play with other English-speaking children?

| Yes | No |
|---|---|

19. What languages did you use with other children?

| Arabic | English | Both | Other ..... |
|---|---|---|---|

20. Did you watch TV in English?

| Yes | No |
|---|---|

21. Did your parents encourage you to speak English as much as possible in the house?

| Yes | No |
|---|---|

22. Did your parents read stories in English to you?

| Yes | No |
|---|---|

23. Did your parents correct you when you spoke English?

| Yes | No |
|---|---|

### III. Elementary School

24. How often did you use English between the ages 6-10?

| Always | Often | Seldom | Never |
|---|---|---|---|

25. Who did you speak English with?

| Father | Mother | Siblings | Friends | Others |
|---|---|---|---|---|

26. Did you attend elementary school in a native English -speaking country?

| Yes | No |
|---|---|

27. Was English the primary language of instruction in your elementary school?

| Yes | No |
|---|---|



© 2019 Global Journals

28. Did you have English as a foreign/second language in elementary school?

| | |
|---|---|
| Yes | No |

29. How many hours a week of English did you have in elementary school?

| | | | |
|---|---|---|---|
| 2 hours | 5 hours | 10 hours | More than 10 |

30. Did you have English-speaking friends at school?

| | |
|---|---|
| Yes | No |

## IV. Middle School

31. How often did you use English between the ages 11-13?

| | | | |
|---|---|---|---|
| Always | Often | Seldom | Never |

32. Who did you speak English with?

| | | | | |
|---|---|---|---|---|
| Father | Mother | Siblings | Friends | Others |

33. Did you attend middle school in a native English -speaking country?

| | |
|---|---|
| Yes | No |

34. Was English the primary language of instruction in your middle school?

| | |
|---|---|
| Yes | No |

35. Did you have English as a foreign/second language in middle school?

| | |
|---|---|
| Yes | No |

36. How many hours a week of English did you have in middle school?

| | | | |
|---|---|---|---|
| 2 hours | 5 hours | 10 hours | More than 10 |

37. Did you have English -speaking friends in middle school?

| | |
|---|---|
| Yes | No |

38. What language did you speak with your English -speaking friends in middle school?

| | | |
|---|---|---|
| Arabic | English | Both |

## V. High School

39. How often did you use English between the ages 13-17?

| | | | |
|---|---|---|---|
| Always | Often | Seldom | Never |

40. Who did you speak English with?

| | | | | |
|---|---|---|---|---|
| Father | Mother | Siblings | Friends | Others |

41. Did you attend high school in a native English- speaking country?



© 2019 Global Journals

| Yes | No |
|---|---|

42. Was English the language of instruction in high school?

| Yes | No |
|---|---|

43. Did you have English as a foreign/second language in high school?

| Yes | No |
|---|---|

44. How many hours a week of English did you have in high school?

| 2 hours | 5 hours | 10 hours | More than 10 |
|---|---|---|---|

45. Did you have English-speaking friends in high school?

| Yes | No |
|---|---|

46. What language did you speak with your English -speaking friends in high school?

| Arabic | English | Both |
|---|---|---|

47. Did you travel to English -speaking countries?

Where:

When:

How long:

How often:

48. Were any of the schools you attended private? Which ones?

## VI. Current Level of Linguistic Proficiency

49. Rate your current overall language ability in ENGLISH

1 = Understand but cannot speak

2 = Understand and can speak with great difficulty

3 = Understand and speak but with some difficulty

4 = Understand and speak comfortably, with little difficulty

5 = Understand and speak fluently like a native speaker

50. On a scale from 1 to 5, rate your abilities in English.

(1 =poor; 2= needs work; 3=good; 4= very good; 5= native speaker command)

Reading =____ Speaking = _____ Listening= _____ Writing= _____

51. In general, as a young adult, which language do you prefer to use? (Circle one)

| English | Arabic | Both | It depends on with whom I talk |
|---|---|---|---|



© 2019 Global Journals

52. Do you feel English is your native language or a second language?

| Native language | second language |
|---|---|

53. What would you like to improve about your English language ability?

*Appendix B:* Essay Instructions

Instructions

- Write a 400-word essay about ONE of the three topics listed below using Microsoft word.
  - Include an introduction with a clear thesis sentence
  - Support your thesis sentence with three main ideas: Facts, opinions, or reasons. Be sure to include examples.
  - Write each main idea in a separate paragraph.
- Topics to choose from are:

1. Are you with or against the Preparatory Year? Does it help build skills, or is it a waste of time and effort?
2. Do you prefer to be taught English courses by native speakers of English or by non- natives? Why?
3. Do you depend on computers or books and notes when you study or do your assignments? Why?

*Appendix C:* Exit Questionnaire

Exit Questionnaire
Name……
E-mail……
Answer the following questions

1- When you write on a computer, which program or application do you use? (Circle one)

| Note Pad | Pages (Apple) | Word (Microsoft | Other……. |
|---|---|---|---|

2- When you see the red line under a word, do you correct the spelling yourself? Or use the Spell Check feature in the program?

| Try to correct it myself first | Use the Spell Check Feature |
|---|---|

3- Do you trust that Spell Check will flag all your spelling errors?

| Yes | No |
|---|---|

4- Does Spell Check provide you with the word you are looking for immediately?

| Yes | No | Sometimes |
|---|---|---|

5- Do you re-check misspelled words that have been corrected by Word by using a dictionary?

| Yes | No | Sometimes |
|---|---|---|

6- When you make a spelling error and Word fails to correct that error, what do you do?

| Use Google | Use a dictionary | Change the word | Do nothing |
|---|---|---|---|



© 2019 Global Journals

7- Can you write an essay, for example, on a computer without Spell Check? Why?

---

---

## References Références Referencias


1. Alhaisoni, E. M., Al-Zuoud, K. M., & Gaudel, D. R. (2015). Analysis of spelling errors of Saudi beginner learners of English enrolled in an intensive English language program. *English Language Teaching*, 8(3), 185-192. Retrieved from https://login.ezproxy.net.ucf.edu/login?auth=shibb&url=http://search.ebscohost.com/login.aspx?direct=true&db=mzh&AN=2015650831&site=eds-live&scope=site
2. Al-Jabri, F. (2006). *Common English spelling difficulties of Omani learners*. Sultanate of Oman: Ministry of Education.Retrieved July 2, 2016, from http://www.moe.gov.om/portal/sitebuilder/sites/eps/English/MOE/baproject/Ch%2011%20Common%20English%20spelling%20difficulties%20of%20Omani%20learnersi.pdf
3. Al Jarf, R. (2005).The effects of listening comprehension and decoding skills on spelling achievement of EFL freshman students. *English Language & Literature Teaching,* 11(2), 35-50. Retrieved July 6, 2016, from http://www.academia.edu/17598051/The_Effects_of_Listening_Comprehension_and_Decoding_Skills_0n_Spelling_Achievement_of_EFL_Freshman_Students
4. Al Jarf, R. (2010). Spelling error corpora in EFL. *Sino-USA*, 7(1), 73. Retrieved from http://www.finchpark.com/KNUFLE/book-1/unit06/Spelling-error-corpora-EFL.pdf
5. Al-Ta'ani, M. (2006). *An investigation of spelling errors found in written composition of Second and third secondary students in the United Arab Emirates* (Unpublished Doctoral Thesis). Sudan University science and technology.
6. Antonsen, L. (2012). Improving feedback on L2 misspellings– an FST approach. *Proceedings of the SLTC 2012 Workshop on NLP for CALL. Linköping Electronic Conference Proceedings 80,* 1-10. Retrieved August 24, 2016, from http://www.ep.liu.se/ecp/080/001/ecp12080001.pdf
7. Atkinson, K. (2004). GNU Aspell. Retrieved July 20, 2016, from http://aspell.net/
8. Babbie, E. (2007). *The basics of social research*. US: Wadsworth.
9. Beal, V. (n.d.). Word processing (word processor application). Retrieved April 04, 2016, from http://www.webopedia.com/TERM/W/word_processing.html
10. Bestgen, Y., & Granger, S. (2011). Categorizing spelling errors to assess L2 writing. *International Journal of Continuing Engineering Education and Life Long Learning*, *21*(2),235–252.Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.224.8918&rep=rep1&type=pdf
11. Burston, J. (1998). Review of Antidote 98. *CALICO Journal*, *16*(2), 197–212. Retrieved from https://www.calico.org/p-72-Antidote%2098%20(11999).html
12. Chaudhuri, B., & Samanta, P. (n.d.). A simple real-word error detection and correction using local word bigram and trigram. *The Twenty-Fifth Conference on Computational Linguistics and Speech Processing (ROCLING 2013),* 211-220. Retrieved August 24, 2016, from https://www.semanticscholar.org/paper/A-simple-real-word-error-detection-and-correction SamantaChaudhuri/162fb818aa65132f3a425c2e8539e9633bbc1fa0/pdf.
13. Cook, V. (1999). *Teaching spelling*. Retrieved from http://homepage.ntlworld.com/vivian.c/Writings/index.htm
14. Corder, S. P. (1967). The significance of learner's errors. *International Review of Applied Linguistics, 5*, 161-170. Retrieved from http://files.eric.ed.gov/fulltext/ED019903.pdf
15. Corder, S. P (1975). Error Analysis, Inter language and Second Language Acquisition. *Language Teaching, 8*, pp. 201-218. Retrieved July 6, 2016, from http://journals.cambridge.org/article_S0261444800002822
16. Cotos, E. (2011). Potential of automatic writing evaluation feedback. CALICO Journal, 28(2), 420-459.
17. Cowan, R., Choi, E. H., & Kim, H. D. (2003). Four questions for error diagnosis and correction in CALL. *CALICO Journal, 20*(3), 451-463.
18. deHaan, A., & Oppenhuizen, T. (1994). Speller: A reflexive ITS to support the learning of second language spelling. *Computers in Human Behavior, 10*(1), 21–31.
19. Dixon, L. Q., Zhao, J., & Joshi, R. (2010). Influence of L1 Orthography on Spelling English Words by Bilingual Children: A Natural Experiment Comparing Syllabic, Phonological, and Morphosyllabic First Languages. *Learning Disability Quarterly*, *33*(3), 211-221.
20. Emery, H. (2005, July). *An investigation into the nature and causes of reading and spelling errors made by Arab ESL learners* (Unpublished doctoral dissertation, 2005). University of Wales. Retrieved July 4, 2016, from http://orca.cf.ac.uk/55563/1/U583975.pdf




© 2019 Global Journals

21. Fallman, D. (2002, April). *The Penguin.* Using the web as a database for descriptive and dynamic grammar and spell checking. Paper presented at the Conference on Human Factors in Computing Systems (CHI2002), Minneapolis, MN.
22. Fender, M. (2008). Spelling knowledge and reading development: Insights from Arab ESL Learners. *Reading in a Foreign Language*, *20*(1), 19-42.
23. Figueredo, L., & Varnhagen, C. K. (2004). Detecting a problem is half the battle: The Relation between errortype and spelling performance. *Scientific Studies of Reading*, *8*(4), 337-356.
24. Flor, M., & Futagi, Y. (2012, June). On using context for automatic correction of non-word misspellings in student essays. In *Proceedings of the seventh workshop on building educational applications Using NLP* (pp. 105-115). Association for Computational Linguistics. Retrieve from http://www.anthology.aclweb.org/W/W12/W12-20.pdf#page=123
25. Godolakis, H., C. (2014). A study of the use of spell and grammar checker in texts by second foreign language learners of Spanish. *Revista Hisoanista Escandinava, 3*(2), 23–40. Retrieved from http://journals.lub.lu.se/index.php/rhe/article/download/15795/14275
26. He, T., & Wang, W. (2009). Invented spelling of EFL young beginning writers and its relation with phonological awareness and grapheme-phoneme principles. *Journal of Second Language Writing*, *18*(1), 44-56.
27. Holmes, G., & de Moras, N. (1997). A French language grammar analyzer: What use for Anglophone students? In P. Liddell, M. Ledgerwood, & A. Iwasaki (Eds.), *Proceedings of the Third Conference on Foreign Language Education and Technology (FLEAT III)* (pp. 91-106). Victoria, British Columbia, Canada: University of Victoria.
28. Hovermale, D. (2010). An analysis of the spelling errors of L2 English learners. Presented at CALICO 2010 Conference, Amherst, MA, USA, June 10-12, 2010. Retrieved from http://www.ling.ohiostate.edu/~djh/presentations/djh_CALICO2010.pptx
29. Heift, T., & Rimrott, A. (2005). Language learners and generic spellcheckers in CALL. *CALICO Journal*, *23*(1), 17–48. Retrieved from https://calico.org/html/article_130.pdf
30. Heift, T., & Rimrott, A. (2008). Evaluating automatic detection of misspellings in German. *Language Learning & Technology, 12*(3), 73–92. Retrieved from http://llt.msu.edu/vol12num3/rimrottheift.pdf
31. Helfrich, A., & Music, B. (2000). Design and evaluation of grammar checkers in multiple languages. *Proceedings of Coling 2000: The 18th international conference on computational linguistics* (Vol. 2, pp. 1036–1040). Association for Computational Linguistics. Retrieved from http://www.aclweb.org/anthology/C00-2153.pdf
32. Hu, Zhuanglin. (2001). *Linguistics: A Course Book*. Beijing: Beijing University Press.
33. Ibrahim, M. (1978). Pattern in spelling errors. *English Language Teaching Journal*, *32*(Issue), 207–212.
34. James, C., & Klein, K. (1994). Foreign language learners' spelling and proofreading strategies. *Papers and Studies in Contrastive Linguistics, 29*(Issue), 31–46. Retrieved fromhttp://wa.amu.edu.pl/psicl/files/29/03James.pdf
35. Janssen, C. (n.d.). What is Microsoft Word? - Definition from Techopedia. Retrieved from http://www.techopedia.com/definition/3840/microsoft-word
36. Kharma, N. & Hajjaj, A. (1989). Errors in English among Arabic speakers: Analysis and remedy, London: Longman.
37. Kukich, K. (1992). Techniques for automatically correcting words in text. *ACM Computing Surveys*, *24*(4), 377–439.
38. Lawley, J (2016) Spelling: Computerised feedback for self-correction. *Computer Assisted Language Learning, 29*(5), 868-880. Retrieved from http://dx.doi.org/10.1080/09588221.2015.1069746
39. Mitton, R. (1987). Spelling checkers, spelling correctors and the misspellings of poor spellers. *Information Processing and Management*, *23*(5), 495–505.
40. Mitton, R., & Okada, T. (2007). *The adaptation of an English spellchecker for Japanese writers*. London: Birbeck e Prints. Retrieved from http://eprints.bbk.ac.uk/592/3/592.pdf
41. Montrul, S. (2012). Questionnaire in English for bilingual speakers of Spanish/English. Retrieved from http://nhlrc.ucla.edu/nhlrc/data/questionnaires.
42. Ndiaye, M., & Vandeventer Faltin, A. (2003). A spell checker tailored to language learners. *Computer Assisted Language Learning, 16(2-3),* 213-232.
43. Okada, T. (2005). Spelling errors made by Japanese EFL writers: with reference to errors occurring at the word-initial and the word-final position. In V. Cook and B. Bassetti (Ed.), *Second language writing systems*, (pp.164-183). Clevedon: Multilingual Matters.
44. One-Click Screen Capture Recording on Windows or Mac Computers with No Install for FREE (2014, November 5). Retrieved from http://www.screencast-o-matic.com/
45. Pedler, J. (2001). Computer spellcheckers and dyslexics—A performance survey. *British Journal of Educational Technology*, *32*(1), 23–37.
46. Pollock, J., & Zamora, A. (1984). Automatic spelling correction in scientific and scholarly text. *Communications of the ACM*, *27*(4), 358–368.
47. Richards, J. C. (1974). A non-contrastive approach to error analysis. In J. C. Richards (Ed.), *Error*




© 2019 Global Journals

*analysis: Perspectives on second language acquisition* (pp. 172–188). London, England: Longman.
48. Rimrott, A. (2005). *Spell checking in computer-assisted language learning: A study of misspellings by nonnative writers of German* (master's thesis). Simon Fraser University, Canada. Retrieved from www.summit.sfu.ca/system/files/iritems1/5196/etd1618.pdf
49. Sahrir, M. (2015) *Design of an Arabic spell checker font for enhancing writing skills: self-learning prototype among non-Arabic speakers. US-China Education Review A, 5* (1), 26-37. Retrieved from http://irep.iium.edu.my/id/eprint/38824
50. Silent (mute) Arabic letters. (n.d.). Retrieved July 24, 2016, from http://www.as-sidq.org/durusulQuran/index/silent.htm
51. Smart, J. R., & Altorfer, F. (2003). *Teach yourself Arabic*. London: Hodder Arnold.
52. Snyder, W.E. (1995). *Cognitive strategies in second language lexical processing. Evidence from English speakers' spelling errors in Spanish.* Unpublished doctoral dissertation, Northwestern University, Evanston, IL.
53. Tajweed. (n.d.). Retrieved July 24, 2016, from http://wp.thekitaab.com/tajweed/
54. Thome, G. (1987). *Rechtschreibfehler turkischer und deutscher Schuler* [Misspellings by Turkish and German students]. Heidelberg, Germany: Julius Groos Verlag.
55. Weisstein, Eric W. "Word Sequence." From *Math World*--A Wolfram Web Resource. http://mathworld.wolfram.com/WordSequence.html
56. Writing Enhancement Software Review 2013. (n.d.).Retrieved from http://writing-enhancement-software-review.toptenreviews.com/ms-word-details.html.



© 2019 Global Journals

Global Journal of human-social science: G
Linguistics & Education
Volume 19 Issue 10 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-460X & Print ISSN: 0975-587X

# Moral Education through Literature with Special Reference to Novels of DH Lawrence

By Hemraj

*Abstract-* Literature always has been playing the role of moral and ethical values; it's not a mere instrument for rejoicing our nerves or entertaining us. It tries to lights up our subconscious mind to bring it to the conscious stage to enable it to understand the complicacies of life and intrigue situations. Thereby, we become able to understand the nuances of life, the good and bad. Perfect idealism can be taught through literature only as literature transcends the reality; it touches down on the grand imagination. Moral and ethical values can be enthused better in an emotive and sensitive person; literature does this phenomenon abundantly. It creates the positive vibes which make the affected reader or audience crave for the adoption of values inherent literary description. There is nothing better than literature which may create the ripples, even in a cruel criminal, for the actions have been committed. He or she may repent for the crimes or wrongdoings and crave for reforms. So, literature has ever played an undisputed role in social reforms.

*Keywords:* *education, morality, values, spirituality, ethical, divinity, sex.*

*GJHSS-G Classification:* *FOR Code: 339999*




*Strictly as per the compliance and regulations of:*

© 2019. Hemraj. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

# Moral Education through Literature with Special Reference to Novels of DH Lawrence

Hemraj

*Abstract-* Literature always has been playing the role of moral and ethical values; it's not a mere instrument for rejoicing our nerves or entertaining us. It tries to lights up our subconscious mind to bring it to the conscious stage to enable it to understand the complicacies of life and intrigue situations. Thereby, we become able to understand the nuances of life, the good and bad. Perfect idealism can be taught through literature only as literature transcends the reality; it touches down on the grand imagination. Moral and ethical values can be enthused better in an emotive and sensitive person; literature does this phenomenon abundantly. It creates the positive vibes which make the affected reader or audience crave for the adoption of values inherent literary description. There is nothing better than literature which may create the ripples, even in a cruel criminal, for the actions have been committed. He or she may repent for the crimes or wrongdoings and crave for reforms. So, literature has ever played an undisputed role in social reforms.

*Keywords: education, morality, values, spirituality, ethical, divinity, sex.*

## I. Introduction

After the discovery of printing, the role of literature has been acknowledged in providing moral education. It's evident from the fact that literature could be relied upon to find the answers whenever one is in a dilemma on the best way. There is no doubt that the fictional lives have affected generations of readers and, because of their power, and beauty influenced many lives in a profoundly moral sense. The French and Russian revolutionary terror and twentieth- century horrors have made it clear that high culture and moral virtues may not be compatible. It was because literature prevalent at those times affected the common people at large than highly cultured society, particularly that literature was specially written for those depressed classes. So, the role of literary works cannot be ignored in shaping and cultivating our cultural, ethical and moral senses.

## II. Moral and Ethical Values in the Novels of DH Lawrence

As moral values emanate from the deep- rooted strands of mind, morality can be best analyzed in the literary works which delve deep into the mental agonies of a character and psychologically examines the various aspects of the personality and attitudes of its characters. In this respect, DH Lawrence stands a top in developing his characters internally, psychologically. The characters in his novels go through the mental processes which determine their ultimate actions to follow. An internal conversation taking hold in the minds of characters is abundantly reflected while facing the realities of lives.

Lawrence was a prolific writer. He started his career as a writer with some poems. In his novels, he shows the conflict between instinct and intellect. The life of the individual was presented as part of a larger life flow. This larger life flow has its own currents which carry the individual's larger flow of life. In his novels, there is a penetrating criticism of modern society. Such a criticism reveals Lawrence's sustained creative effort. He interprets life in all its wide variety. His novels reveal his penetrating insight into life and terseness of life. Lawrence depicts the dehumanizing forces of our society.

Lawrence was against the machine-centered civilization of our times. He felt that our material civilization dehumanizes man. Lawrence's novels focus on feminine interest. He expresses sympathy for the social plight of intelligent women trapped in a male-dominated society. In his early development as a novelist, Lawrence took up the cause of feminism, insisted on women's rights, thus opposing the tyranny of the male world. He was beginning to express ideas from the feminine point of view. The great achievement of Lawrence is the recognition of the female principle of vitality competing with the male principle in vitality. Lawrence admits that it has come from Hardy's women like Elizabeth-Jane, who are more intelligent and stronger-willed than men. The new element developed in Hardy and Lawrence in their portrayal of women character as states of being, rather than as a refined social class and moral choice. Lawrence is concerned with the principle of life itself, invisibly realized in humanity as sex, seen visibly in the world as what we call nature. His characters are all human beings with common weaknesses and virtues, and are neither saints, nor angels, nor unredeemed villains.

Lawrence was aware of the social history and the forces at play in his own mother's life. As a young man he expected a lot too much from the women he came in contact with, and whom he loved. He wanted them to be his teachers, mentors and spiritual leaders. Lawrence searched for a long time for the perfect

*Author: Ministry of Panchayati Raj, Jr. Translation Officer.*
*e-mail: rajvictor76@gmail.com*



© 2019 Global Journals

expression of his ideas in a woman, but he was disappointed. Therefore, he invented them.

Few writers in modern English literature have reached the pinnacle of uncritical admiration and vilification, and this is rightly attributed to the personality of Lawrence himself. His admirers too have not always been an asset to him. Some extreme derogatory remarks such as a sex-soaked genius', or hardly more literate, 'sick' muddle-headed, sex-mad D.H. Lawrence' have affected how Lawrence, arguably many readers have regarded the finest English novelist. The controversy that has encircled Lawrence arose out of a misunderstanding of what he was saying, and also out of confusion between a dislike of his moral attitudes, especially towards sex and a consequent inability to perceive the amazing literary genius with which these attitudes are portrayed in the novels. Lawrence has emerged as a genius out of educational and class background, devoid of middle-class advantages possessed by the literary figures of that time, some critics began to patronize him. As Lawrence himself has admitted that in the early days they were always telling him that he has got genius as if to console him for not having their inestimable advantages. Such an extreme example of this type appeared in a British council pamphlet on D.H. Lawrence in which Kenneth Young wrote that Lawrence's

'dogmatic insistence that he alone held the truth
About the universe surely reflects a deep-seated
Feeling that he had missed the fruits of the
Normal public school and university education,
Which gave his literary contemporaries a
Breadth of knowledge and assurance that he
Always lacked'[1]

Lawrence's works can be best understood by studying the class classification prevalent in the late 19th-century often, the middle class and upper-class friends were puzzled by his illogical rejection of their values and their qualified friendship.

## III. Morality and Spirituality

Sex to Lawrence, is conceived as being closer to the traditional Christian view of marriage than it is to modern concepts of free love, promiscuity as can be observed from his novels, he seems to have developed a disgust for cheap exploitation of sex.

Lawrence portrays a world that has become increasingly apparent since World War I. He has always dealt with sex. To Lawrence sex, is self-justifying that it is not subject to judgment by other values but is indeed the source of other values. Lawrence is most modern in his treatment of sex. There is nothing in him of the Victorian prudery and inhibitions. He insisted on the sacred nature of sex, on the religious element in its consummation. He is the most honest man who treated the subject with great freedom, one who examined both the physical and spiritual aspects of the matter. Lawrence has been a pioneer in breaking down sexual taboos in literature in a very real sense; he was a pioneer in reinventing women the novels introducing the inner conflicts and the sexual feeling which had been denied to women in English fiction for nearly a century.

In 'The Rainbow' Lawrence openly deals with sexual matters. Ursula, daughter of Anna, remains always enquiring and unfettered. Her path is partly intellectual and partly sexual. She succumbs to the darkness as she reconciles consciousness with unconsciousness and accepts her destiny. No other writer had depicted the main tensions of industrialized man or the issues which at once separate and bind the sexes.

Sons and Lovers are based on the relationship in terms of sexual desires fulfillment. Paul is attracted towards Miriam. In course of time both Paul and Miriam realized that they were in deep love with each other, but Paul could not touch her. Then he meets Clara Dawes, wife of Baxter Dawes, who was five years senior to Paul. She was lovely and charming. She fascinated Paul. She became the mistress of Paul, but she refused to divorce her husband. Here it is quite explicit through the characters that Lawrence himself was not sure about his ideas. He was settled between old Christian values and modern open sexual relationship. Again, Paul began to meet Miriam, and finally she yielded to his savage passion. Even then he felt dissatisfied. So again, he turned to Clara. He stayed with her for some time. But still Miriam loves Paul sincerely. She always prays for his safety and security. She feels that she is absorbed in him. She feels that she is dominated by him. But at the same time, she is inhibited by her intense religiosity. Here it is obvious that Lawrence's characters are of dual nature. At the end, Lawrence is not able to give a permanent solution to this problem. He cannot make a perfect balance between the sexual relationship and spirituality. All his characters are in dilemma, they are not sure whether they are on the right path or not.

Lawrence attributed the contemporary spiritual crisis of the Christian west to this association of rationality with divinity. It not only linked the idea of sin with freedom, but also made freedom a source of all human tragedy. Lawrence maintained that organized Christianity was always on the side of mind negating the body and all sensuous experience. Thus, the genuine religious consciousness of the west, deprived of all living experience, felt thwarted and frustrated and revolted against Christianity and its morality of the rational.

[1] Kenneth Young, British Council pamphlet 1952, P 16-17



© 2019 Global Journals

Lawrence differs significantly from those modern primitivisms who advocate sexuality as a mode of transcendence. It was his conviction that physical consummation by itself was not the goal of life unless it resulted in the consummation in flesh. Sexuality divorced from a consummation in spirit was negative and destructive. It was no substitute by itself for the ultimate or the Transcendent. Lawrence associated sensual consummation with Aphrodite worship.

The Renaissance reversal to sensuous forms in art, Lawrence felt, was nothing but Aphrodite worship, a self-conscious pursuit of the sensuous in which the senses 'seek the reduction of flesh, the flesh reacting upon itself, to a crisis, an ecstasy, a phosphor scent transfiguration in ecstasy. This quest, he maintained, was incomplete, for it ignored the other consummation in spirit. Renaissance had substituted an absolute of sensuality for the philosophical absolute of the church. The self was negated in both of them.

## IV. Divinity and Spirituality

Lawrence's approach to sex would, thus, appear to be part of a new philosophy of self born out of the rejection of the absoluteness of the concept of the original sin. Lawrence felt that the denial of sex had violated the freedom of self and had led to a false conception of reality. It had superseded the prophetic wisdom of the glory of the self and the resurrection of the body.

Divorcing the concept of sin from sex, Lawrence made a plea for a new ontology. He accepted and emphasized the finitude of self in its totality, as opposed to the doctrine of the immortality of soul and as a consequence rejected the concept of a philosophic absolute. He sought to restore back the self to its primary state of glory and rejected the path-way to redemption through a religion that advocated self-denial and self-abnegation. In the process, he became the most vocal prophet of the body.

An ethics based on the denial of self in any form had no place in Lawrence's worldview. He considered the rejection of the old morality of sin as a necessary pre-requisite of the liberation of man from the shackles of an old and dying tradition. By placing the seat of sin in human mind, Lawrence transferred the problems of sin and evil from self's finitude to its freedom. The self had to find its own salvation, not in an abstract scheme of morals, but in the loving reality, felt in through the "blood".

Lawrence's art in this respect suffered from an overemphasis on the passion and the sensual in life, but perhaps it was due for its negation since the days of Paul. The over stresses in Lawrence are, as D.W. Foster has pointed out:

> … patently the effects of a heroic attempt to restore balance where a culture has tried to live on the level of consciousness and will, dead from the neck down.[2]

Lawrence's ideas change and develop throughout his writing career and he himself was violently opposed to taking up fixed moral positions.

Essentially, Lawrence's insistence on sex is a moral insistence on the need for an awareness of the possibilities of life. The moral basis of his view of sex is important. Sex to Lawrence, is conceived as being closer to the traditional Christian view of marriage than it is to modern concepts of free love.

Lawrence remained puritanical in his attitude towards the unconventional sexual behavior throughout his life, but his deep ideas always involved a respect for life and disgust for cheap exploitation of sex. To Lawrence sex has always been remained a religious activity.

According to Lawrence soul of man and the soul of woman is new with the infinite delight of life and the ever newness of life. So, a man and a woman are new to one another throughout a lifetime, in the rhythm of marriage. Sex is the prime factor in determining balance of male and female in the universe, the attraction, the repulsion, and the transit of neutrality, always different, always new. Sex to Lawrence was important because it was the only chance civilized man had in contact with the greater universe of nature and hence of reality, but modern industrial civilization had perverted man perverted sex. Lawrence acknowledges that this perversion had resulted in a split between thought and feeling, so that men became dominated by their minds and made no effort to recreate the two in harmony. True moral awareness of life was only possible when thought and feelings were united in the whole man.

Lawrence's concern was sole with the primitive and uncivilized. for Lawrence, Sex is not merely an end in itself, not merely an entertainment or a means of producing children, but a means towards determining reality, and this reality is seen as existing in the immediate world of nature. His works are appealing in nature as his philosophy is naturalistic, and his emphasis on superb evocations of a sense of the fullness of life in his natural descriptions of places and things. According to him to be alive in the flesh is magnificent, and sexual fulfillment is the awareness of this life in oneself and the world outside. The world of nature is conceived as supplying meaning to existence, as an antithesis to the diseased world of man in society.

Lawrence's ideas are within a definite moral tradition which leads to the development of a Romantic view about nature which was essentially a 19th-century phenomenon. His ideas are not merely the distorted and

[2] DW Foster, "Lawrence, Sex and Religion", Theology, Vol. LXIV (Jan 1961) PP 11-12



© 2019 Global Journals

peculiar aberrations of one man. Lawrence was some sort of noble savage himself, that he was an emotional rather than an intelligent writer, and that his continued insistence on sex precludes any real regard for the intellect. Lawrence believes it to be a matter of the utmost vital urgency that man should accept his physical and animal nature. Nature is right, and in so far as it is to be followed, man's animal nature is a good and admirable quality. Lawrence develops this idea to its logical conclusion, making sexual relationships the basis of his naturalistic viewpoint, for in a world dominated by the huge excesses of industrial society, sex is the only remaining link with nature.

Lawrence sees sex as the particular problem of the 20th century, and where he and his characters are concerned it is essentially through sexual relationships of a particular kind that fulfillment in life can be obtained, but he refuses to accept that these are universal laws for all men. Most readers today understand Lawrence's position sympathetically and acknowledge that he stood for values of some impossible in a world whose traditional values were fast-changing. It is explicit that Lawrence's emphasis on sex is exaggerated, whilst he himself regarded a true understanding of it to be central to his work. He stressed on the ideas on modern civilization with which he was dealing. It is important to learn what Lawrence understood sex to be. He did not write to convey moral ideas on sex or anything else, but rather that the moral ideas emerge themselves from the imaginative experiences of the writing career. Lawrence was an emotional writer.

Lawrence is concerned about certain ideas and values, but these values are not fixed or absolute doctrine. He did not claim these ideas to be valid for all people at all times. He believed in the strong views on the suitability of the novel form. He always tried to seek new and varied techniques in his works, but as he is too emotional and unrestrained to concern himself with the technical problems. So few critics have given Lawrence the credit he deserves as technical innovator. His interpretation of the function of characters in his novels is original and imaginative. Lawrence felt that moral ideas could be discussed in the novel at a supreme level of artistry and he develops purely realistic level of new trends in the novel form. His novels can be understood by looking into the development of the themes and ideas, which dominates his novels.

Thus, it is evident from the above discussion that the study of literature provides us that very humanizing power that engages feeling and imagination, and gives the wisdom for valuing dignity and high spirits. For moral absolutes, great literature works as a source of human aspiration for the highest ideals. Literature also dealt with the complexity of moral dilemmas set against the relativity of experience. Literature has great formative power on public morality. We are influenced to behave in a particular way as our personality gets affected by the stronger personality of the author. Role of moral education through literature has been persisted, and played a key role in formulating national policies in any nation in the twentieth-century.

## Bibliography

*Primary Sources*

1. Lawrence, D.H., the Rainbow. Penguin Books, 1981
2. Lawrence, D.H., Sons and Lovers, Penguin Books
3. Lawrence, D.H., Women in Love. London: Grafton Books, 1989
4. Lawrence, D.H., Lady Chatterley's Lover Bombay: Jaico Publishing House, 1987
5. Lawrence, D.H., the Collected Letter of D.H. Lawrence. Ed. Harry T. Moore. London: Heinemann, 1962

*Secondary Sources*

1. Alldrit, Keith. The Visual Imagination of D.H. Lawrence London: Edward Arnold, 1971.
2. Allot, Miriam, Novelists on the Novel. London: Routledge and Kegan Paul, 1959.
3. Beal Antony. D.H. Lawrence, Edinburg and London: Oliver and Boy, 1966.
4. Carewell, Catherine. The Savage Pilgrimage, London: Martin Secker, 1972.
5. Chambers, Jessie, D.H. Lawrence: A Personal Record. London: Cape, 1935.
6. http://www.doiserbia.nb.rs/img/doi/0579-6431/2006/0579-64310602401P.pdf



© 2019 Global Journals

Global Journal of human-social science: G
Linguistics & Education
Volume 19 Issue 10 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-460X & Print ISSN: 0975-587X

# Ready for School? Systematic Review of School Readiness and Later Achievement

By Marília Mariano, Amilton Santos-Junior, Jacqueline L. Lima, Jacy Perisinotto, Clara Brandão, Pamela J. Surkan, Silvia S. Martins & Sheila C. Caetano

*Federal University of São Paulo*

*Abstract-* The association between specific school readiness skills and long-term school-related outcomes are still unclear and under debate. It is the first study to systematically review the literature on factors associated with school readiness evaluation about school-age achievement. This review included longitudinal studies with a minimum follow-up of five years; these studies performed the assessments during early childhood. The authors registered the study in the PROSPERO database (CRD42018089694). Five databases were searched (PubMed, Scielo, Scopus, ERIC, and Psyc Articles). Independent reviewers screened a total of 4,278 articles that were retrieved, and 13 were eligible for inclusion. Results showed that early language and math abilities at preschool age, middle to higher socioeconomic status, and socialemotional skills were the most significant variables in the promotion of positive school-age development. Preschool education and socioe motional or behavioral skills may compensate for academic difficulties in later school achievement.

*Keywords:* *child, achievement, school, readiness, systematic review.*

*GJHSS-G Classification:* *FOR Code: 139999*

READYFORSCHOOLSYSTEMATICREVIEWOFSCHOOLREADINESSANDLATERACHIEVEMENT

*Strictly as per the compliance and regulations of:*

© 2019. Marília Mariano, Amilton Santos-Junior, Jacqueline L. Lima, Jacy Perisinotto, Clara Brandão, Pamela J. Surkan, Silvia S. Martins & Sheila C. Caetano. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

# Ready for School? Systematic Review of School Readiness and Later Achievement

Marília Mariano [α], Amilton Santos-Junior [σ], Jacqueline L. Lima [ρ], Jacy Perisinotto [ω], Clara Brandão [¥], Pamela J. Surkan [§], Silvia S. Martins [χ] & Sheila C. Caetano [ν]

*Abstract-* **The association between specific school readiness skills and long-term school-related outcomes are still unclear and under debate. It is the first study to systematically review the literature on factors associated with school readiness evaluation about school-age achievement. This review included longitudinal studies with a minimum follow-up of five years; these studies performed the assessments during early childhood. The authors registered the study in the PROSPERO database (CRD42018089694). Five databases were searched (PubMed, Scielo, Scopus, ERIC, and Psyc Articles). Independent reviewers screened a total of 4,278 articles that were retrieved, and 13 were eligible for inclusion. Results showed that early language and math abilities at preschool age, middle to higher socioeconomic status, and social-emotional skills were the most significant variables in the promotion of positive school-age development. Preschool education and socioe motional or behavioral skills may compensate for academic difficulties in later school achievement.**

*Keywords: child, achievement, school, readiness, systematic review.*

## I. Introduction

There is a growing awareness of the influence of early childhood education on academic performance and emotional-behavioral functions that have repercussions throughout the life course (Duncan et al., 2007; Grissmer, Grimm, Aiyer, Murrah, & Steele, 2010; Heckman, 2011). Many early education programs are designed to promote children's physical, intellectual, and social competencies that contribute to overall developmental competence and readiness for school. However, how specific skills in preschool children are related to long-term academic or emotional outcomes are still unclear and debatable (Pianta, Cox, & Snow, 2007).

Aspects of school readiness tested in Duncan et al. (2007) came from six longitudinal data sets and included measures of early reading and math skills, social skills, attention, and internalizing and externalizing behavior. Their results suggested that early math skills should receive more highlighted in curricula, interventions, and research because they predicted both future math and reading skills. However, they found no effects of social skills or internalizing and externalizing behavior as predictors of later academic or emotional outcomes (Duncan et al., 2007). Pagani, Fitzpatrick, Archambault, and Janosz (2010) extended the studies of Duncan et al. (2007) by including the measurement of motor skills. They found that attention, motor skills, and general knowledge were much stronger overall predictors of later math, reading, and science scores than were early math and reading scores alone (Pagani et al., 2010).

Recently, Thomson et al. (2019) examined a population cohort of 34,552 children and found that children exhibiting poor social-emotional functioning at school entry had at least two times the odds of a subsequent mental health condition by age 14, including depression, conduct disorder, anxiety and attention-deficit/hyperactivity disorder (ADHD). The authors also observed patterns of symptom continuity between early childhood, measured as internalizing and externalizing symptoms, and adolescent mental health problems, such as depression, conduct disorder, anxiety, and ADHD. They also highlighted that more than 40% of children entered the school system with relative vulnerabilities in social-emotional functioning that were associated with early-onset mental health conditions (Thomson et al., 2019).

Considering the inconsistencies in the literature in regards to school readiness and, to date, and there is no known systematic reviews that conducted in this area, we aimed to clarify which factors evaluated in preschool promote positive outcomes in childhood or adolescence. Also, there are no standardized models of measuring school readiness, and less is known whether existing models might assess individual skills in their childhood, adolescence, and adulthood. Given this context, this systematic review has the following aims: (1) to analyze associations between school readiness and later achievement; (2) to describe factors that are key to school readiness; and (3) to clarify which and how the components of child readiness could promote later positive development.

## II. Method

### a) Design

We conducted and reported a systematic review by the reporting guidance provided in Preferred Reporting Items for Systematic Reviews and Meta-

*Author α ρ ω ¥ ν: Federal University of São Paulo.*
*e-mail: mariano.mrl@gmail.com*
*Author σ: State University of Campinas, UNICAMP.*
*Author §: Johns Hopkins Bloomberg School of Public Health.*
*Author χ: Mailman School of Public Health, Columbia University.*



© 2019 Global Journals

Analyses (PRISMA) (Moher et al., 2009). The guidelines and criteria outlined were followed and applied to ensure proper reporting of the data (Moher et al., 2009). We elaborated a systematic review protocol and registered it with PROSPERO (CRD42018089694; https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=89694).

*b) Search criteria*

A literature search was conducted in the following electronic databases: PubMed, Scielo, Scopus, Eric, and Psyc Articles. The keyword-based queries for all databases were the terms "school readiness" AND "achievement" OR "attainment."

The studies included in this systematic review accomplished the following inclusion criteria: longitudinal design with follow-up of a minimum of 5 years (so we could study the academic outcomes later in school), publication in an English-language peer-reviewed journal and child assessment during early childhood or preschool, including measurements of general child developmental skills (e.g. language, motor skills, cognition, social-emotional, and executive functioning) that could have an impact on later achievement, transition phases, and/or subsequent stages of human development, including in adolescence and adulthood.

*c) Selection procedure*

The search included articles from 2000 to February 2019, returning 4,278 references. The domain of school readiness is broad, and in the first round of assessment, all titles that could address the following questions were selected without restrictions on study designs: "How is school readiness defined?"; "What are its main components?"; "How do different testing models compare?"; "What are social, environmental, and biological factors that influence school readiness?"; "How does school readiness affect outcomes in the health, socialization, and education of children and their later development?" In this first round, all three study team members performed automated searches in the databases discussed above, removed duplicates, and screened titles. The titles were divided and distributed to three authors (MM, ASJ, and JLL). These same authors conducted an independent selection of abstracts and extraction data. A fourth author (SCC) decided differences in judgment on selection criteria occurred in two articles. .

*d) Data extraction*

The same independent reviewers extracted the data.. All researchers independently read and filled in the table with the summary data from 10% of all articles to ensure internal validity. Data were entered separately into forms of variables, including publication year, country of study, sample size, children's and caregivers' characteristics, analysis/statistical methods, instruments, and main findings and study limitations. Data were reviewed and collated into tables by the first author (MM).

## III. Results

Figure 1 displays the flow of search information through the phases of this systematic review. We identified 4,278 records through database searches, and 68 articles remained eligible based on the criteria of having a longitudinal design with a follow-up equal to or greater than five years. We excluded two studies that used six different longitudinal data sets (Duncan et al., 2007; Grissmer et al., 2010) that could not be used to answer aims (2) and (3). One article that analyzed only social-emotional function or mental health were also excluded (Thomson et al., 2019). The final sample for data extraction consisted of 13 articles.

Table 1 displays the descriptive information for studies included in this systematic review. These articles were published between 2001 to 2018, with the majority (n=12) published after 2010. Sample sizes ranged from 204 children in a Canadian study (Bernier, McMahon, & Perrier, 2016) to 10,666 children in the Early Childhood Longitudinal Study–Kindergarten Cohort (ECLS-K) (Li-Grining, Votruba-Drzal, Maldonado-Carreño, & Haas, 2010). All studies had balanced samples with respect to sex (proportions by sex ranging from 47% to 53% boys) and described sex differences regarding child development (Cooper, Osborne, Beck, & McLanahan, 2011; Fitzpatrick & Pagani, 2012; Hammer et al., 2017; Li-Grining et al., 2010; Pagani & Fitzpatrick, 2014; Quirk, Grimm, Furlong, Nylund-Gibson, & Swami, 2016; Sabol & Pianta, 2012; Shah, Kaciroti, Richards, & Lumeng, 2016). Regarding the age of first child evaluation and ethnicity, we noticed a wide range of diversity. Almost half of the studies (n=5; 38%) had samples focused on specific ethnic groups (e.g., all Latino children in the study of Quirk, Grimm, Furlong, Nylund-Gibson, & Swami, 2015) or that disproportionately represented a particular ethnic group (e.g., 87% European ethnic origin in the study of Woodward, Lu, Morris, and Healey, 2016). Pagani and Fitzpatrick (2014) did not report subjects' ethnicities in the samples in their two studies. The age of the first evaluation ranged from newborn infants (e.g., Pagani, & Fitzpatrick, 2014) to eleven-year-olds in a retrospective study (Kurdek & Sinclair, 2001).

Socioeconomic status was reported in different ways based on various indicators, such as caregivers' jobs (semiskilled, unskilled/unemployed) (Woodward et al., 2016), average family income (Bernier, Mcmahon, & Perrier, 2016), and a composite of socioeconomic status, occupational prestige, and level of education (Fitzpatrick & Pagani, 2012). The proportion of low-income families ranged between 12% and 44% of the sample, except one study, in which all children were from families of low socioeconomic status (Quirk et al., 2016).



© 2019 Global Journals

Less than half of the studies (n=5; 38%) had follow-up periods of longer than five years, and the longest follow-up period was ten years (Paschall, Gershoff, & Kuhfeld, 2018). Most studies discussed attrition rates (n=10; 77%), that ranged from 10% (Woodward et al., 2016) to 56% (Fitzpatrick & Pagani, 2012).

The studies used a wide variety of instruments as predictor and outcome measures representing the full range of components included in different definitions of readiness. As noted, standardized assessment tools, such as the Peabody Picture Vocabulary Test, the Woodcock-Johnson Psycho-Educational Battery–Revised, and the Wechsler Preschool and Primary Scale of Intelligence, were the most commonly used academic/cognitive predictor and outcome measures. Social/behavioral measures included parent and teacher reports of behavior using, respectively, the CBCL and TRF. Studies also included assessments regarding the family and school climate and classroom engagement behavior, e.g., Sabol & Pianta (2012). As expected, all authors showed direct relation between preschool language, math skills, social-emotional skills, family characteristics, poverty, and a later performance at school age. Sex impacted performance differently, but the majority of studies showed that boys had lower cognitive and social-emotional abilities than did girls. The most common study limitations were that the samples were not representative of the population, had limited generalizability, weak reliability of assessments, could not infer causality and had much-missing data at follow-up.

In Table 2, we present the variety of measures evaluated in each study and across studies. Birth weight, a widely used classical variable impacting child development, was present only in a few articles (n=5; 38%). Sleep, average weekly hours of television viewing, prenatal smoking, and maternal mental health each appeared once in different studies. More than a half of the works examined the parent-child effects and interactions, classroom engagement and school characteristics, and maternal education. The majority of studies (n= 11; 84%) extensively discussed about poverty.

Finally, to describe the components that are important or that contain the constructs of school readiness, we described in Table 3 the assessment of each measure. All studies used language and math skills as measures of the construct of readiness, except for one work (Quirk et al., 2016), which did not use math skills for the same purpose. Behavioral and emotional aspects, such as approaches to learning, social or socio emotional skills, and externalizing and internalizing symptoms, were present in approximately half of the articles (n= 7; 54%). Few studies have evaluated memory, motor skills, attention, and health-related behaviors (e.g., consumption of soft drinks or sweet snacks) as factors significant to readiness.

## IV. Discussion

This systematic review revealed a small but growing body of literature associated with school readiness and later achievement. It is the first review that aims to understand how the preschool experience impacts the child later performance. Also, we synthesize the evidence about factors which promoting positive outcomes in life course. We included thirteen recent studies in the review and found promising evidence for a protective role of the preschool experience in enhancing school readiness. Also, we evidenced a positive influence on child development for behavioral and emotional child functioning, including problematic behaviors, social-emotional skills, and approaches to learning. Factors associated with family characteristics, especially socioeconomic status, also showed a strong influence on readiness. The results of this review provide a unique overview of longitudinal and cohort research focusing on school readiness and later achievement and highlight links among the academic success, social-emotional skills, and behavioral skills that originate in early childhood.

### *a) Sex differences*

Girls showed higher classroom engagement (Fitzpatrick & Pagani, 2012; Sabol & Pianta, 2012), attention skills (Pagani & Fitzpatrick, 2014), school readiness (including math and reading scores (Quirk et al., 2016; Shah et al., 2016)), and social-emotional skills (Hammer et al., 2017; Quirk et al., 2016). Overall, boys showed more disruptive behavior (e.g., Sabol & Pianta, 2012), as they are more than two times as likely to enter kindergarten with lower academic and social-emotional readiness (Quirk et al., 2016) and are more negatively affected by parental partnership instability than girls—thus contributing to the gender gap in school readiness and educational attainment (Cooper et al., 2011). Li-Grining et al. (2010) found a protective impact of approaches to learning on girls' math growth and boys' reading growth.

### *b) Social-emotional and behavioral factors*

This review highlighted the protective role of children's emotional and/or behavioral functioning, such as social-emotional regulation and approaches to learning, motivation, and problematic behavior (Cooper, Osborne, Beck, & McLanahan, 2011; Hammer et al., 2017; Li-Grining et al., 2010; Pagani, & Fitzpatrick, 2014; Quirk et al., 2016; Sabol, & Pianta, 2012; Woodward et al., 2016).

Li-Grining et al. (2010) found that children with higher levels of early learning showed improved academic achievement (reading and math) and indicated a continuing increase across elementary



© 2019 Global Journals

school. Sabol and Pianta (2012) discussed that children's early social skills might have inhibited or helped their performance in the fifth grade. It is particularly important to note that social skills may compensate for weaknesses in other domains, such as executive functioning. Woodward et al. (2016) carefully investigated the associations between child development and mental health. They found in children at age nine that almost 33% of infants born very preterm, compared to 20% of children born full-term, met DSM-IV criteria for at least one mental health disorder, such as ADHD and anxiety disorders (the most common diagnosis). They concluded that early emotional and behavioral regulation difficulties might place preschoolers, regardless of birth status, at an increased risk of longer-term mental health and educational problems, especially at risk of language difficulties. This finding is a concern in the integrated development of children, as more effective communication skills offer young children an alternative means of expressing their needs and desires as well as an additional tool for regulating their behavior in the form of self-talk and other strategies. Therefore, delays in one domain, such as regulatory abilities, seem to promote disadvantages in various dimensions (Woodward et al., 2016).

Given the significant impact that emotional and behavioral functioning can have on child readiness and later achievement (e.g., Quirk et al., 2016; Woodward et al., 2016), further research should include evaluation of these domains of human development (Thomson et al., 2019). Duncan et al. (2007) showed that measures of socioemotional behaviors, including internalizing and externalizing problems and social skills, were generally non-significant predictors of later academic performance, even among children with relatively high levels of problem behaviors. Some years later, Pagani, Fitzpatrick, Archambault, and Janosz (2010) replicated the model of school readiness specified in Duncan et al. (2007) and showed that behavioral problems (externalizing problems—aggression; internalizing problems—anxiety) and prosocial skills also emerged as predictors of some aspects of later achievement, such as classroom engagement and academic success. The last authors also argued that motor skills contributed significantly to the prediction of later performance above and beyond the original primary elements of school readiness (Pagani et al., 2010). Thus, given inconsistencies in the literature, future research should better clarify the role of behavioral and social-emotional outcomes.

*c) Poverty factor*

Overall, poverty was linked with poor initial and later achievement in academic, social-emotional and behavioral functioning and school readiness (Bernier et al., 2016; Fitzpatrick & Pagani, 2012; Hammer et al., 2017; Li-Grining et al., 2010; Paschall et al., 2018; Raffington, Prindle, & Shing, 2018; Sabol & Pianta, 2012; Shah et al., 2016). Hammer et al. (2017) found that children with low socioeconomic status had almost 15 times greater of a chance of being a late talker and had the lowest math performance. Similarly, higher socioeconomic status was prospectively associated with higher classroom engagement, receptive vocabulary, and number knowledge (Fitzpatrick & Pagani, 2012).

Paschall et al. (2018) demonstrated a link between poverty and race: non-poor White students and poor White students had better performance than nonpoor Black students and poor Black students. The differences in scores between these groups were identified at school entry and remained sizeable across historical time and developmental age. Disparities in ethnicity and poverty did not grow across time, but gaps in performance remained the same as at initial school entry (Paschall et al., 2018). Thus, poverty and ethnicity seemed to hamper social mobility. Similarly, Raffington et al. (2018) showed that children with low socioeconomic status had lower average starting points and cognitive growth slopes in verbal comprehension and math ability throughout later childhood. In addition, these children continued to have cognitive growth trajectories that were substantially lower than those of never-poor children. Among these children, there were differential effects of income changes predicting child cognition in early childhood that continued into later childhood and early adolescence: income gains positively predicted cognitive performance of poor children in later childhood; otherwise, income losses negatively predicted cognitive performance of poor children in later childhood (Raffington et al., 2018). Finally, Li-Grining et al. (2010) showed that children's approaches to learning (e.g., independence, flexibility, organization, eagerness to learn, concentration) was a protective factor against poverty, indicating that interventions should enhancing these skills, especially for children with low socioeconomic status.

Moreover, parental partnership transitions or residential instability (as co-residential and dating) had negative impacts on child development: both types of unbalance were associated with lower verbal ability and more externalizing, social, and attention problems (Cooper et al., 2011).

Regarding language achievement, school readiness and higher levels of early verbal ability were linked to positive effects on later language and math performance, socio emotional development, classroom and school engagement, attention levels, dietary habits and preferences, and behavior problems (Bernier et al., 2016; Fitzpatrick & Pagani, 2012; Hammer et al., 2017; Quirk et al., 2016; Sabol & Pianta, 2012; Pagani & Fitzpatrick, 2014; Shah et al., 2016; Kurdek & Sinclair, 2001). Quirk et al. (2016), Shah et al. (2016), and Hammer et al. (2017) showed that preschool experience was a stronger predictor of children's cognitive

© 2019 Global Journals

readiness and later language achievement. For young children with low reading performance, more than 10 hours per week of child school had a compensatory effect, decreasing their chances of maintaining poor reading abilities in kindergarten and elementary school. Concerning the association between language skills and healthier dietary habits and preferences, Pagani and Fitzpatrick (2014) showed that higher receptive vocabulary resulted in a decline in snack consumption (21% unit) and the increase in the intake of dairy products, fruits and, vegetables (15-17% unit).

*d) Academic abilities*

Math skills at school age were positively associated with verbal and behavioral readiness (Hammer et al., 2017; Kurdek & Sinclair, 2001; Li-Grining et al., 2010; Pagani & Fitzpatrick, 2014). Pagani and Fitzpatrick (2014) also found that kindergarten math skills were an relevant predictor of engagement in activities of physical effort (9% unit increase), later child-reported psychosocial adjustment of intrinsic motivation, attention skills, and academic self-concept (7-19% unit increases). Moreover, poor school readiness in math was associated with: low SES, younger age, being male, being small-for-gestational-age, no early intervention at 24 months, and no preschool experience (Shah et al., 2016).

Few studies have examined associations among cognitive abilities (such as attention and working memory), psychomotor abilities, and intelligence with readiness and later academic performance (Fitzpatrick & Pagani, 2012; Kurdek & Sinclair, 2001; Pagani & Fitzpatrick, 2014; Quirk et al., 2016; Sabol & Pianta, 2012; Woodward et al., 2016). Kurdek and Sinclair (2001) found that visuomotor skills were linked to later reading skills, and auditory memory seems significant for both readiness and later success in reading and math. Another study showed that working memory increased classroom engagement, knowledge and receptive vocabulary, and nonverbal IQ predicted receptive vocabulary, number knowledge, and classroom engagement (Fitzpatrick & Pagani, 2012).

*e) Preterm child*

Only two studies in this review found an association between children born preterm and school readiness (Shah et al., 2016; Woodward et al., 2016). Both articles showed that preterm children performed consistently more poorly across all measures of academic functioning, including reading, language, spelling, and math, in preschool and later (Shah et al., 2016; Woodward et al., 2016). In addition, Woodward et al. (2016) discussed that preterm children also had (1) lower levels of positive affect, persistence, regulatory ability, and psychomotor skills; (2) difficulty in transitioning between activities; and (3) higher levels of emotional and behavioral dysregulation and emotional difficulties as hyperactive/inattention problems. Children born preterm were also at a two-fold better rate of delay in language and math abilities (33-45%) (Woodward et al., 2016).

Finally, limitations of the reviewed studies include difficulties in producing causal conclusions, the possibility of unmeasured variables, high attrition rates, and non representative samples (e.g., Cooper et al., 2011; Kurdek & Sinclair, 2001; Li-Grining et al., 2010). As the majority (n= 11) of the studies took place within the USA and Canada, these results could not be generalized to other socio cultural environments. Moreover, the studies used different aspects of child development to assess school readiness. Consequently, the results presented a large variety of conclusions, and it is unclear which dimension of child development (e.g., cognition, verbal ability, early numeracy, problem behavior) and of the environment (e.g., paternity instability, family socioeconomic status, preschool experience) may have a significant influence. Before the results of these studies are generalized to the broader community we need to clarified the inconsistencies in the school readiness framework and predictors

## V. Conclusion

Our research sought to clarify the associations between school readiness and later achievement (see Figure 2 for the School Readiness Framework). Relevant factors of school readiness that could promote future positive development were: early language and math abilities (preschool age), middle to higher family socioeconomic status, social-emotional skills, a lack of behavioral problems, the preschool experience of more than 10 hours per week and classroom engagement, partnership transitions or residential instability. Being a girl and being born full-term were also associated with better child performance. Surprisingly, in this review, the motricity and cognition evaluations did not appear consistently as domains relevant to school readiness. These findings are significant for service providers working in human development and education and who are developing interventions for children and adolescents.

## References Références Referencias

1. Bernier, A., Mcmahon, C. A., & Perrier, R. (2016). Processes A Longitudinal Study of Developmental Processes. Developmental Psychology, 1–12. https://doi.org/10.1037/dev0000225
2. Cooper, C. E., Osborne, C. A., Beck, A. N., & McLanahan, S. S. (2011). Partnership Instability, School Readiness, and Gender Disparities. Sociology of Education, 84(3), 246–259. https://doi.org/10.1177/0038040711402361
3. Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P., …



© 2019 Global Journals

Japel, C. (2007). School Readiness and Later Achievement. Developmental Psychology, 43(6), 1428–1446. https://doi.org/10.1037/0012-1649.43.6.1428

4. Fitzpatrick, C., & Pagani, L. S. (2012). Intelligence Toddler working memory skills predict kindergarten school readiness. Intelligence, 40(2), 205–212. https://doi.org/10.1016/j.intell.2011.11.007
5. Grissmer, D., Grimm, K. J., Aiyer, S. M., Murrah, W. M., & Steele, J. S. (2010). Fine motor skills and early comprehension of the world: Two new school readiness indicators. Developmental Psychology, 46(5), 1008–1017. https://doi.org/10.1037/a0020104
6. Hammer, C. S., Morgan, P., Farkas, G., Hillemeier, M., Bitetti, D., & Maczuga, S. (2017). Late Talkers: A Population-Based Study of Risk Factors and School Readiness Consequences. Journal of Speech, Language, and Hearing Research, 60(3), 607–626. https://doi.org/10.1044/2016_jslhr-l-15-0417
7. Heckman, B. J. J. (2011). The Value of Early Childhood Education, 31–36.
8. Kurdek, L. A., & Sinclair, R. J. (2001). Predicting Reading and Mathematics Achievement in Fourth-Grade Children from Kindergarten Readiness Scores. Journal of Educational Psychology, 93(3), 451–455. https://doi.org/10.l037//0G22-0663.93.3.45.
9. Li-Grining, C. P., Votruba-Drzal, E., Maldonado-Carreño, C., & Haas, K. (2010). Children's Early Approaches to Learning and Academic Trajectories Through Fifth Grade. Developmental Psychology, 46(5), 1062–1077. https://doi.org/10.1037/a0020066
10. Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., Altman, D., Antes, G., … Tugwell, P. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement (Chinese edition). Journal of Chinese Integrative Medicine, 7(9), 889–896. https://doi.org/10.3736/jcim20090918
11. Pagani, L. S., & Fitzpatrick, C. (2014). Children's School Readiness: Implications for Eliminating Future Disparities in Health and Education. Health Education and Behavior, 41(1), 25–33. https://doi.org/10.1177/1090198113478818
12. Pagani, L. S., Fitzpatrick, C., Archambault, I., & Janosz, M. (2010). School readiness and later achievement: A French Canadian replication and extension. Developmental Psychology, 46(5), 984–994. https://doi.org/10.1037/a0018881
13. Paschall, K. W., Gershoff, E. T., & Kuhfeld, M. (2018). A Two Decade Examination of Historical Race/Ethnicity Disparities in Academic Achievement by Poverty Status. Journal of Youth and Adolescence, 47(6), 1164–1177. https://doi.org/10.1007/s10964-017-0800-7
14. Pianta, R. C., Cox, M. J., & Snow, K. L. (2007). School Readiness and the Transition to Kindergarten in the Era of Accountability. Baltimore, MD: Brookes.
15. Quirk, M., Grimm, R., Furlong, M. J., Nylund-Gibson, K., & Swami, S. (2016). The association of latino children's kindergarten school readiness profiles with grade 2-5 literacy achievement trajectories. Journal of Educational Psychology, 108(6), 814–829. https://doi.org/10.1037/edu0000087
16. Raffington, L., Prindle, J. J., & Shing, Y. L. (2018). Income gains predict cognitive functioning longitudinally throughout later childhood in poor children. Developmental Psychology, 54(7), 1232–1243. https://doi.org/10.1037/dev0000529
17. Sabol, T. J., & Pianta, R. C. (2012). Patterns of school readiness forecast achievement and socioemotional development at the end of elementary school. Child Development, 83(1), 282–299. https://doi.org/10.1111/j.1467-8624.2011.01678.x
18. Shah, P. E., Kaciroti, N., Richards, B., & Lumeng, J. C. (2016). Gestational Age and Kindergarten School Readiness in a National Sample of Preterm Infants. Journal of Pediatrics, 178, 61–67. https://doi.org/10.1016/j.jpeds.2016.06.062
19. Thomson, K. C., Richardson, C. G., Gadermann, A. M., Emerson, S. D., Shoveller, J., & Guhn, M. (2019). Association of Childhood Social-Emotional Functioning Profiles at School Entry With Early-Onset Mental Health Conditions. JAMA Network Open, 2(1), e186694. https://doi.org/10.1001/jamanetworkopen.2018.6694
20. Woodward, L. J., Lu, Z., Morris, A. R., & Healey, D. M. (2016). Preschool self regulation predicts later mental health and educational achievement in very preterm and typically developing children. Clinical Neuropsychologist, 31(2), 404–422. https://doi.org/10.1080/13854046.2016.1251614

## Financial Support

This work was supported by the Brazilian National Council of Research (CNPq) grant number 466688/2014-8, and by the São Paulo Research Foundation (FAPESP) grant number 2016/10120-1 (P.I. Caetano). The project was also partially funded by the Columbia President's Global Innovation Fund-UR008509 (P.I., Martins) and by FAPESP - 2016/11202-1 (Co-I, Perisinotto). One of our researchers (M.M.) received a scholarship from FAPESP (grant number 2016/05116-5).

*Conflict of Interest Statement*

The authors have no conflicts of interest to declare.



© 2019 Global Journals

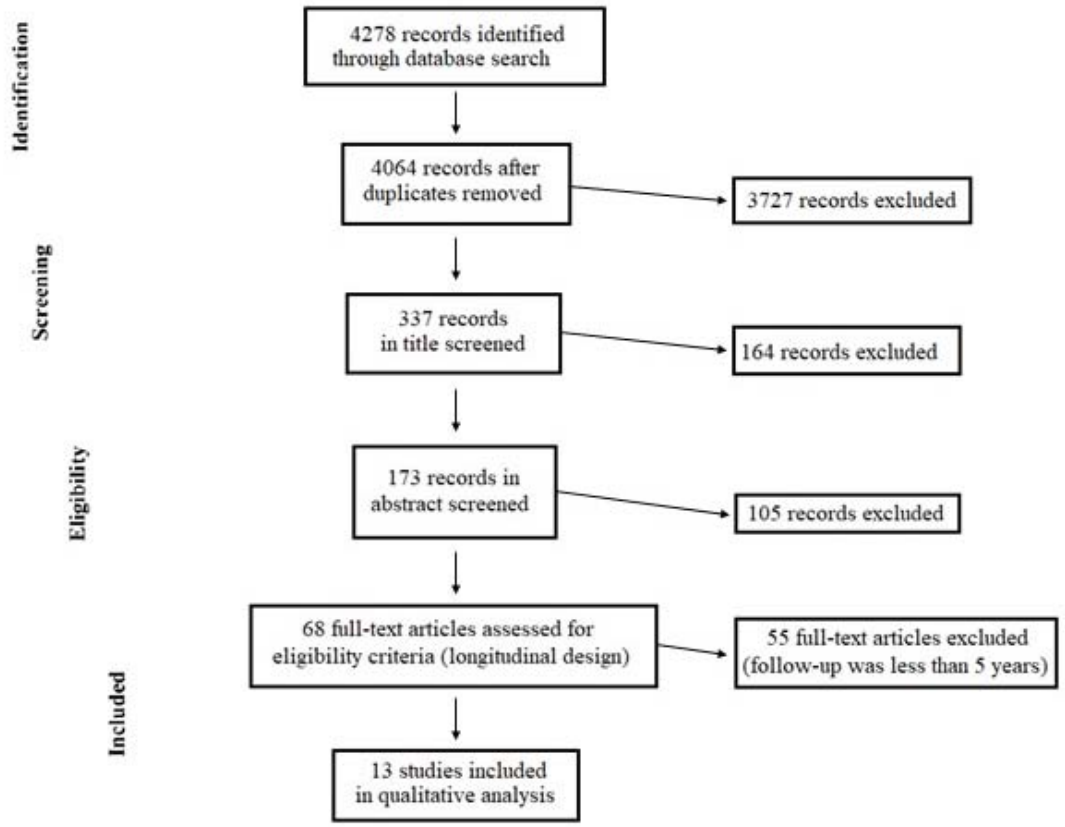



*Fig. 1:* Flow of information through the differnet phases of the scholl readiness systematic review

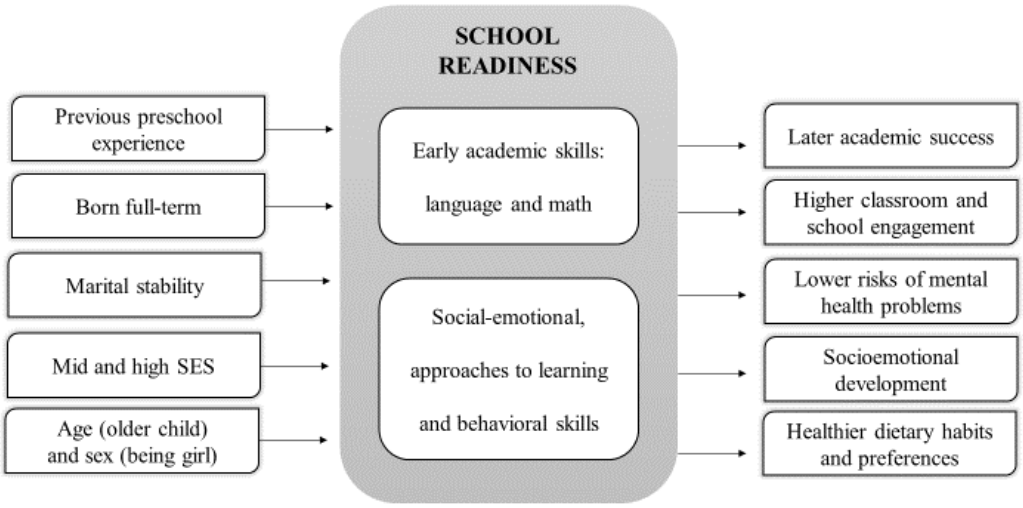



*Fig. 2:* School readiness Framework



© 2019 Global Journals

*Table 1:* Descriptive information for studies of school readiness included in the systematic review

| Authors and year | Country of study/cohort or longitudinal name | Sample: 1st sample size; % boys; mean age at 1st evaluation; race; LIC | Follow-up in y/% lost to follow-up | Instruments | Results | Study limitations |
|---|---|---|---|---|---|---|
| Kurdek & Sinclair (2001) | US/N.A. | 281 children; 47% boys, 93% white; 11.2 y; 17% LIC | 5/N.A. | Kindergarten Diagnostic Instrument; CTB | - Young child in preschool (VS. older child): not at disadvantage to long-term academic performance<br>- Readiness in verbal skills: linked to later performance in reading and math<br>- Readiness in visuomotor skills: linked to later performance in reading<br>- Auditory memory may be a core readiness skill linked to later excellence in reading and math<br>- These links occurred independently of age and were generalized across children's age and gender | - Not a representative sample<br>- Subscores from the readiness assessment were based on different numbers of items - weak reliability |
| Li-Grining, Maldonado-Carreno, Votruba-Drzal & Haas (2010) | US/ECLS-K | 10,666 children; 50% boys; 4 y; 58% white/non-Hispanic, 11% black/non-Hispanic, 18% Hispanic; 18% LIC | 5/38% | PIAT-R; PPVT; SRS; SSRS; Teacher and parent report versions of the ECLS-K SCS | - Children with ↑ ATL tended to experience ↑ rates of growth in reading and math (VS. ↓ ATL), such that differences between them increased across elementary school<br>- Early ATL: ↑ protective for girls' math growth and boys' reading growth<br>- Children's ATL: protective for socioeconomic groups in poverty and at educational and occupational risk<br>- Early ATL: particularly protective for children with ↓ levels of initial academic achievement | - No causal conclusions<br>- Classroom processes, child IQ, and other developmental phenomena not captured by the ECLS-K may confound the associations |
| Cooper, Osborne, Beck, & McLanahan (2011) | US/Fragile Families Study | 4,898 children; 52.44% boys; 1 month in 1st wave; 47.62% black, 27.34% Hispanic, 21.08% white; 36.17% poor families | 5/40% | PPVT-R; CBCL; WAIS | -Partnership transitions: ↓ 1.5 points of verbal ability and school readiness; ↑ attention and social problems, and externalizing problems at age 5<br>- Children born into alternative family forms: ↑ risk for academic and behavioral problems at school entry<br>- Coresidential instability and dating transitions: associated with ↓ verbal ability and ↑ externalizing, attention, and social problems; ↓ cognitive and behavioral readiness for school<br>- Coresidential transitions and child behavioral problems differ by gender: boys responding ↑ negatively - ↑ externalizing problems, attention problems, and social problems; | - Possibility of unmeasured variables (such as mothers' partnership instability)<br>- Unable to accurately measure the proportion of time spent in single-parent homes between transitions<br>- Results may not be generalized |
| Fitzpatrick & Pagani (2012) | Canada/QLSCD | 2,744 children; 53% boys; 0.42 y; .02 SD - SES+ occupational prestige + level of education | 5.75/56% | Imitation Sorting Task; CES; NKT; PPVT; WPPSI-R; ICQ | - ↑ 1 SD in working memory: ↑ classroom engagement and knowledge and receptive vocabulary<br>- ↑ 1 SD in nonverbal intelligence and receptive vocabulary: ↑ classroom engagement<br>- Being a girl predicted ↑ 0.201 SD unit in kindergarten classroom engagement<br>- Early receptive vocabulary predicted ↑ 0.418 SD unit in kindergarten receptive vocabulary and ↑ 0.158 SD in number knowledge<br>- Nonverbal IQ predicted ↑ 0.076 SD unit in receptive vocabulary and ↑ 0.151 SD unit in number knowledge<br>- ↑ SES was prospectively associated with ↑ 0.142 SD unit in classroom engagement, ↑ 0.119 SD unit in receptive vocabulary, and ↑ 0.188 SD unit in number knowledge | - Many missing data at follow-up |



© 2019 Global Journals

| | | | | | | |
|---|---|---|---|---|---|---|
| Sabol & Pianta (2012) | US/NICHD | 944 children; 48% boys; 4.5 y; 82,6% white; 12% LIF | 5/29% | SSRS, CBCL, Positive Engagement SMI; WJ; CPT; TRF; DBD; WJ–R–ACH; HOME; CPT, COS-5th grade | 6 School readiness profiles:<br>- (1) Attention problems: average on positive social and emotional skills, ↑ engagement in school VS. group 4, ↑ reading VS. groups 2 and 4, and < than group 6;<br>-(2) Low working memory: ↓ math achievement VS. groups 3 and 6<br>- (3) Low to average social skills and working memory: ↓ social skills in the classroom and ↓ working memory<br>- (4) Social and externalizing problems: ↓ engaged VS. group 5, ↓ math achievement VS. groups 1 and 6<br>- (5) High social competence<br>- (6) High working memory and mild externalizing: ↑ social skills at 5th grade; ↓ teacher-reported disruptive behavior VS. group 3 and fewer social problems VS. group 4;<br>- Groups 2 and 4: ↑ disruptive behavior disorders VS. group 5 and 6, ↓ scores in reading and math<br>- Groups 3 and 4: ↓ math achievement VS. group 6<br>- ↑ language scores at 54 months predicted ↑ positive socioemotional development<br>- Poor children: ↓ social skills and ↑ disruptive behavior<br>- Boys: ↑ engagement and ↑ disruptive behavior | - No measure of children's functioning between the two time points or test of how that functioning might play a role in children's outcomes |
| Pagani & Fitzpatrick (2014) | Canada/QLSCD | 2,694 children; 47% boys; 0.41 y | 9.75/32% | NKT; PPVT; SBQ; CAT of Mathematics | - Kindergarten receptive vocabulary predicted all 4th-grade dietary habits and preferences: ↑ receptive vocabulary predicted ↓ 21% unit in snack consumption and ↑ 15-17% unit in dairy product, fruit and vegetable intake<br>- Kindergarten math skills associated with engaging in activities of physical effort: ↑ math scores predicted ↑ 9% unit in physical effort<br>- ↑ school readiness skills in kindergarten predicted ↑ performance in 4th grade, ranging from ↑ 6%-34% unit in math, science, reading, receptive vocabulary and attention<br>- ↑ school readiness predicted ↑ 4th-grade teacher-reported psychosocial adjustment: std coefficients predicted ↑ 6-28% unit in classroom and school engagement, attention, receptive vocabulary and ↓ 10% unit in emotional distress<br>- Early math skills: the most consistent predictors between kindergarten and later child-reported psychosocial adjustment: std coefficients predicted ↑ 7-19% unit intrinsic motivation, attention skills, and academic self-concept<br>- Kindergarten math, receptive vocabulary and attention were unrelated to later intrinsic motivation<br>- ↑ in kindergarten receptive vocabulary and attention predicted academic self-concept;<br>- Kindergarten attention related to 4th grade attention skills → stability across raters and over time<br>- Girls: > on attention skills than boys | N.A. |
| Shah, Kaciroti, Richards, & Lumeng (2016) | US/ECLS-Birth Cohort | 6,300 children; 50.5% boys; newborn; 57.4% White/non-Hispanic, 13.7% Black/non-Hispanic, 22.65% Hispanic; 44.2% below | 5/33% | PPVT; Pre-CTOPP | - ↓ gestational age = ↓ school readiness at kindergarten reading and math<br>- VPT child: ↑ % of poor school readiness in reading and math, but the risk dropped and gradually plateaued in infants born at ≥ 32 weeks of gestation<br>- VPT child: ↑ odds of poor school readiness in reading (OR 2.58) and math (OR 3.38), with ↓ odds of poor school readiness for children born at ≥32 weeks of gestation;<br>- Poor school readiness in reading: associated with ↓ SES, younger age, school level, race, male, | - Limited health and neonatal risk information<br>- No data on maternal IQ or family history of learning difficulties |



© 2019 Global Journals

| | | | | | | |
|---|---|---|---|---|---|---|
| | | poverty threshold | | | and no previous preschool experience<br>- Poor school readiness in math associated with ↓ SES, younger age, school level, male, being small-for-gestational-age, no early intervention at 24 months, and no previous preschool experience | |
| Quirk, Grimm, Furlong, Nylund-Gibson, & Swami (2016) | US/ECLS | 1,253 children; 50.6% boys; 4 y; all Latino children and LIC | 5/35% | KSEP; CST; CELDT | - *LCA 5 groups in kindergarten entry*: (1) balanced-high: 10.4% of sample, ↑ KSEP; (2) mod SE, mod Cog: 14.6% of sample, mid scores of social-emotional and cognitive; (3) high SE, low Cog: 15.9% of the sample; (4) low SE, low Cog: 28.8% of sample, ↓ scores of social-emotional and cognitive; (5) extremely low: 30.3% of sample, ↓ KSEP<br>- Physical readiness was not identified in classes<br>- Older students, ↑ proficient in English, female, and ↑ preschool experience: ↑ likely to be in the balanced-high class than the (3) high SE, low cog, (4) low SE, low cog, and (5) extremely low *GMM* 3 groups in grades 2-5: (1) high-decreasing: 10.7% of sample, students scored above average across all for years, but performed lower each year; (2) average: 47.9% of sample, middle of E-LA achievement score; (3) low E-LA: 41.4% of sample, ↓ E-LA<br>- 1 in 10 of Latino students entered kindergarten exhibiting a balanced-high profile of social-emotional, physical, and cognitive school readiness<br>- 3 in 5 students exhibited ↓ or extremely ↓ levels of school readiness across the domains<br>- 1 in 10 students exhibited above average literacy achievement growth patterns in grades 2 through 5, yet 2 in 5 fell into a group of below average literacy achievement<br>- Boys: more than 2x as likely to enter kindergarten with ↓ levels of cognitive and social-emotional readiness VS. girls<br>- Preschool experience: strongest predictor of children's cognitive readiness important to later literacy achievement | - Generalizability of these profiles might be limited |
| Woodward, Lu, Morris, & Healey (2016) | New Zealand/N.A. | 207 children; 49% boys; 87% European ethnic origin; 29% semiskilled/unskilled/unemployed | 9/10% | ERC; BSID-II; WPPSI; DAWBA; WJ-III; SDQ; Elley-Irving SE-Index; HADS | - VPT children at ages 2 and 4: ↓ levels of positive affect, ↓ persistence, ↑ difficulty in transitioning between activities when engaged in structured play interaction, ↓ regulated during psychometric testing at ages 2 and 4, ↑ levels of emotional and behavioral dysregulation, ↑ emotional difficulties and hyperactive/inattention problems, ↓ MDI and PDI<br>- VPT child at age 9: ↑ 3 times diagnosis of ADHD, ↑ 1.6 times anxiety disorder; consistently performed ↓ on reading, language, spelling and math; 33% of children born VPT had at least 1 mental health disorder VS. 20% of FTB<br>- Rates of delay in learning areas: ↑ for VPT child (33-45%) VS. FTB (14–16%)<br>- For both VPT and FTB children: tendency for ↑ regulatory difficulties during early childhood associated with ↑ risks of later mental health problems as ADHD and anxiety (conduct disorder only for VPT)<br>-Weak associations in early regulatory problems and later risk of spelling and math delay | N.A. |
| Bernier, McMahon, & Perrier (2016) | Canada/N.A. | 204 children; 1y; 83.8% European; average of family income | 5/21% | MCDI; DGT; OMMM; Whisper Tower; CL; LM; Simon | - Child initial cognitive performance, family SES, sex, maternal sensitivity, and maternal mind-mindedness predicted child language ability, which in turn predicted 3-year effortful control, which predicted 4-year effortful control, which | - Nonexperimental nature of the design |



© 2019 Global Journals

| | | | | | | |
|---|---|---|---|---|---|---|
| | | (CDN range < than $20,000 to > than $100,000) | | says; Lollipop test; MBQS; BSID | ultimately predicted school readiness | |
| Hammer, Morgan, Farkas, Hillemeier, Bitetti, & Maczuga (2017) | US/ECLS-B | 6,050 children; 51% boys; 0.75 y; 65% white, 15.8% African American, 12.7% Hispanic; 14.4% lowest SES quintile (father's and mother's education and occupation, and household income) | 5/49.6 % | MCDI; CES-D; HOME; Three Bags Task; BSID; PPVT; PLBS; SSRS | - Low reading performance: being a late talker; ↓ SES; having a family member with a learning disability; child care > than 10 hr/week resulted in ↓ odds of ↓ reading at kindergarten entry<br>- Low math performance: being a late talker and having low receptive vocabulary; African-American children; having a family member with learning disabilities; effect of the lowest SES had odds of almost 15 to 1; quality parenting and 48-month center-based child care or Head Start for > than 10 hr/week resulted in ↓ odds of ↓ math skills;<br>- Problem behavior: being a late talker; ↓ SES, ↑ odds of having approaches to learning problems; ↑ quality parenting, ↓ the odds of approaches to learning problems at 60 months; child in Head Start for > than 10 hr/week, ↑ the odds of approaches to learning problems at 60 months; odds of having internalizing were ↑ by low vocabulary at 48 months (2.86:1)<br>- Late talker and ↓ 48-month vocabular, ↑ the odds of externalizing problems at 60 months; ↓ SES, ↑ the odds of externalizing | - Single source of vocabulary bias problem<br>- Children's receptive and expressive vocabularies were not both measured at each of the data collection waves<br>- Did not conduct specific observations of parent/caregiver-child interactions |
| Paschall, Gershoff, & Kuhfeld (2018) | US/NLSCY | 3,250 children; 5y; 53.1% White, 27.9% Black, 18.9% Hispanic | 10/N.A. | PIAT | - Poverty gap changed across time differently for White, Black, and Hispanic students<br>- Differences between poor and nonpoor White students' scores did not grow but rather remained sizeable across time at school entry or ages 13-14<br>- Differences between poor and nonpoor Black and Hispanic students' scores remained sizeable across historical time and across developmental age<br>- Comparing poor White children with nonpoor Black and Hispanic children illuminated the disparities | - Not nationally representative data of schoolchildren<br>- Cannot describe the size of the achievement gaps<br>- Ignores the variability of families above the federal poverty line |
| Raffington, Prindle, & Shing (2018) | Germany/SECCYD | 1,364 children; 52% boys; 4.6 y; 24% ethnic-minority children; 19% LIC | 7.4/N.A. | WJ PE-R (subtests of verbal comprehension and math) | - Poor children: ↓ average starting points and cognitive growth slopes in verbal comprehension and math ability throughout later childhood<br>- ↑ Income gains from 1 wave to the next were a leading indicator in time of ↑ verbal comprehension and math ability at the next wave for children living in poverty (or losses predicting ↓ scores)<br>- Positive effect of income changes predicting child cognition in early childhood, continues into later childhood and early adolescence for poor children<br>- Cognitive performance of poor children in later childhood is positively predicted by income gains and negatively predicted by income losses<br>- Poor children continued to have cognitive growth trajectories<br>substantially ↓ than never-poor children<br>- Income fluctuations in poor families are still a leading indicator in time of cognitive performance | - Sample was predominantly middle class and underrepresented severely financially strained families<br>- Focused solely on cognitive outcomes<br>- Analyses did not provide a direct test of causality |



© 2019 Global Journals

*Table 2:* Comparison of measures evaluated

| Reference | Child outcome measure(s) | |
|---|---|---|
| | Others measure(s) | |
| Kurdek & Sinclair (2001) | - *Preschool measures*: Auditory memory; body awareness; concept mastery; form perception; general information; gross motor skills; number skills; verbal associations; verbal opposites; visual discrimination; visual memory; visuomotor integration; vocabulary | - *Academic achievement in 4th. grade*: Reading; math; verbal skills; visuomotor skills. |
| | - Family income | |
| Li-Grining, Maldonado-Carreno, Votruba-Drzal & Haas (2010) | - Academic achievement,<br>- Early approaches to learning<br>- Experiences in kindergarten: teachers' and schools' attributes and expectations of children's social and academic behavior | - Schools' geographic region (Northeast or West)<br>- Schools' urbanicity: e.g., located in suburbs or small towns |
| | - Ethnicity<br>- Child low birth weight<br>- Parents working or not employed<br>- Marital status<br>- Language other than English was spoken at home | - Family received welfare<br>- Number of individuals in the household<br>- SES disadvantage: (a) an indicator of poverty - federal poverty line; (b) highest level of parental education; (c) parents held higher- VS. lower-prestige jobs |
| Cooper, Osborne, Beck, & McLanahan (2011) | - Verbal ability<br>- Behavioral problems | - Social problems |
| | - Mother relationship status<br>- Partnership instability (changing residences)<br>- Maternal age<br>- Maternal age in years at birth of first child<br>- Ethnicity<br>- Immigrant status<br>- Education<br>- Poverty | - Child low birth weight<br>- Mothers' cognitive ability<br>- Non-joint births (whether mother has children by another partner)<br>- Partnership instability prior to focal child's birth (number of relationships lasting at least one month prior to relationship with focal child's biological father)<br>- Maternal grandmother's mental health (depression or anxiety) |
| Fitzpatrick & Pagani (2012) | - Academic achievement<br>- Classroom engagement working memory<br>- Nonverbal intellectual skills | - Sleep<br>- Child temperament |
| | - Breastfeeding<br>- Family configuration and functioning | - Parents level of education<br>- Maternal age |
| Sabol & Pianta (2012) | - School readiness<br>- Social skills | - Cognition<br>- Externalizing and internalizing problems |
| | - Early home environment<br>- Child-care quality | - Classroom quality |
| Pagani & Fitzpatrick (2014) | *Kindergarten school readiness:*<br>- Math<br>- Receptive vocabulary skills<br>- Attention skills<br>- Health-related behaviors (body mass index)<br>- Kindergarten child characteristics (i.e., attention problems, physical aggression, emotional distress, and prosocial skills)<br>*Academic achievement—4th grade*:<br>- Math | - Reading<br>- Science<br>- Spelling<br>- Global achievement<br>- Psychosocial adjustment (attentional problems, emotional distress, classroom and school engagement)<br>- Academic self-concept<br>- Intrinsic motivation<br>- Average weekly hours of television viewing |
| | - Number of months breastfed<br>- Family functioning and configuration (intact vs. nonintact) | - Maternal education (high school completion or not) |
| Shah, Kaciroti, Richards, & | - School readiness: language and math | |



© 2019 Global Journals

| | | |
|---|---|---|
| Lumeng (2016) | - Gestational age<br>- Maternal age<br>- Ethnicity<br>- Marital status (married/unmarried)<br>- History of prenatal smoking | - Duration of breastfeeding<br>- Plurality (singleton, twin, multiple gestation)<br>- Maternal education (<high school; high school graduate; >high school)<br>- Poverty (<185% federal poverty level; ≥185% federal poverty level) |
| Quirk, Grimm, Furlong, Nylund-Gibson, & Swami (2016) | - School readiness; literacy achievement | - Previous preschool experience<br>- English language proficiency |
| | | |
| Woodward, Lu, Morris, & Healey (2016) | - Emotional and behavioral regulation;<br>- Child behavior during parent-child interaction<br>- Mental health (ADHD, conduct, anxiety, depression, and autism) | - Educational achievement (math and language)<br>- Cognitive ability |
| | - Birthweight<br>- Parent self-regulation | - Family social risk<br>- Maternal mental health |
| Bernier, McMahon, & Perrier (2017) | - School readiness: color, shapes, numbers, letters<br>- Following commands<br>- Comparing sizes<br>- Counting and labeling objects<br>- Building a tower | - Spelling<br>- Inhibitory control<br>- Receptive vocabulary<br>- Child mental development |
| | - Maternal mind-mindedness<br>- Maternal sensitivity | - Family SES (standardized average of maternal education, paternal education, and family income) |
| Hammer, Morgan, Farkas, Hillemeier, Bitetti, & Maczuga (2018) | - Receptive and expressive vocabulary<br>- Reading and math | - Approaches to learning<br>- Behavioral problems: externalizing, and internalizing |
| | - Father's and mother's education and occupation<br>- Household income<br>- Maternal age at child birth<br>- Birth weight<br>- Medical risk factors in pregnancy | - Family health and well-being<br>- Parenting quality<br>- Hours that child spent in center-based child care |
| Paschall, Gershoff, & Kuhfeld (2018) | - Early academic skills (preschool)<br>- Reading and math skills (elementary) | |
| | - Race and ethnicity<br>- Family poverty status | |
| Raffington, Prindle, & Shing (2018) | - Cognition: math ability and verbal comprehension | |
| | - Income: partners' annual pretax employment income, indicated by the selection of one of 22 income ranges<br>- Poverty grouping: poor/chronic poverty versus never poor<br>- Maternal education | |

*Table 3.* Description of evaluation of child readiness

| Reference | Math or numeracy | Language/verbal ability | Approaches to learning/social skills/socioemotional or behavior problems | Others |
|---|---|---|---|---|
| Kurdek & Sinclair (2001) | - Number skills: knowledge of basic numerical concepts – e.g., counting to 10 | -Vocabulary: knowledge of specific word meanings - "What is a pencil?" | Not examined | - Auditory memory: recall of the sequence of words<br>- Concept mastery: knowledge of basic concepts - left, right, bottom, and top<br>- Form perception: names of basic shapes – e.g., circle, triangle<br>- General information: knowledge of facts typically exposed - "What is ice when it melts?"<br>- Gross motor skills: coordination e.g., jumping, skipping, and hopping<br>- Visuomotor skills composite:<br>* Body awareness: drawing a picture of a person with 16 parts<br>* Visual discrimination: discrimination of similarities and differences of shapes and |



© 2019 Global Journals

| | | | | |
|---|---|---|---|---|
| | | | | geometric forms<br>* Visual memory: memory of observed shapes, letters, or words |
| Li-Grining, Maldonado-Carreno, Votruba-Drzal & Haas (2010) | - General math skills: understanding identifying numbers and recognizing geometric shapes | - Language and literacy skills: receptive vocabulary and reading comprehension | - ATL: attentiveness, persistence, learning independence, flexibility, organization, eagerness to learn, concentration, responsibility, creativity, interest in a variety of things, social skills, self-regulation, ability to control temper, acceptance of peer ideas for group activities, respect for the property rights of others, appropriate responses to pressure from peers, frequency of fights, arguments, tantrums or anger | N.A. |
| Fitzpatrick & Pagani (2012) | - Number sequence to 10<br>- 1 to 1 correspondence in which a sequence is mapped onto objects being counted<br>- Understanding the cardinal value<br>- Successive number represents a set which contains more objects | - Vocabulary | Not examined | - Follow rules, instructions and directions<br>- Listen attentively<br>- Complete work on time<br>- Work autonomously<br>- Work and play cooperatively with other children<br>- Work neatly and carefully |
| Sabol & Pianta (2012) | - Calculation | - Letter-word identification<br>- Passage comprehension | - Social skills: positive socioemotional skills, maladaptive socioemotional behaviors, engagement in school<br>- Externalizing and internalizing problems | - Cognition: attention, working memory |
| Pagani & Fitzpatrick (2014) | - Number sequence from 1 to 10<br>- 1-to-1 correspondence in which a numerical value is mapped onto objects being counted<br>- Cardinal value of each number<br>- Generative rule that relates adjacent cardinal values and that each successive number represents a set that contains more objects | - Receptive vocabulary skills; | - Academic self-concept<br>- Intrinsic motivation<br>- Psychosocial adjustment: attentional problems, emotional distress, classroom engagement, school engagement | - Health-related behaviors: weekly frequency of each child's consumption of soft drinks, sweet snacks, fruits and vegetables, dairy products; children's weekly involvement in activities requiring physical effort during free time<br>- Attention skills: easily distracted; inattentive; unable to concentrate, cannot pay attention for long, cannot sit still, restless and hyperactive; trouble sticking to any activity; cannot stop fidgeting; impulsive, acts without thinking; difficulty waiting for his or her turn; and cannot settle down to do anything for more than a few moments |
| Shah, Kaciroti, Richards, & Lumeng (2016) | - Number sense<br>- Geometry<br>- Counting numerical operations<br>- Pattern recognition | - Vocabulary<br>- Letter and word recognition<br>- Understanding letter-sound relationships<br>- Phonological awareness, sight word recognition, and understanding words in the | Not examined | N.A. |



© 2019 Global Journals

| | | | | |
|---|---|---|---|---|
| | | context of simple sentences | | |
| Quirk, Grimm, Furlong, Nylund-Gibson, & Swami (2016) | Not examined | - Literacy achievement: reading comprehension, literary response and analysis, writing strategies, and written conventions. | - Social-emotional, | - Physical<br>- Cognitive elements |
| Woodward, Lu, Morris, & Healey (2016) | - Math fluency e.g., speed and accuracy in completing addition | - Passage comprehension, e.g., matching words to symbols<br>-Understanding directions<br>- Spelling | -Initiative<br>-Attention<br>-Persistence<br>-Enthusiasm towards tasks<br>- Social engagement<br>- Cooperation<br>- Emotional symptoms<br>- Conduct problems<br>- Hyperactivity/inattention | - Child behavior during parent-child interaction, e.g., solve problems<br>- Positive affect: e.g., facial expressions (smiles and laughter)<br>- Negative affect: e.g., pouting, whining, crying, and signs of anger or frustration<br>- Execute function<br>- Cognition: sensory abilities, memory, learning ability, responsivity |
| Bernier, McMahon, & Perrier (2017) | - Knowledge spatial notions (beside, under, etc.)<br>- Knowledge of numbers | - Knowledge of letters<br>- Knowledge of colors and shapes | Not examined | N.A. |
| Hammer, Morgan, Farkas, Hillemeier, Bitetti, & Maczuga (2018) | - Number sense<br>- Counting<br>- Operations<br>- Geometry<br>- Patterns<br>- Measurement | - Basic skills: letter recognition, letter sounds, early reading, phonological awareness, print conventions, and word matching | - Approaches to learning: eagerness to learn, pays attention well, works/plays independently, keeps working until finished, and has difficulty concentrating.<br>- Externalizing: disrupts others, has temper tantrums, is physically aggressive, and annoys others<br>- Internalizing: seems unhappy, worries about things, and acts shy | N.A. |
| Paschall, Gershoff, & Kuhfeld (2018) | - Mathematic concepts taught in mainstream classrooms, such as number recognition and counting. | - Word recognition and pronunciation ability<br>- Skills at matching letters, naming names, and reading single words out loud | Not examined | N.A. |
| Raffington, Prindle, & Shing (2018) | - Applied problems | - Cognition: verbal comprehension—requires children to name familiar and unfamiliar pictured objects | Not examined | N.A. |



© 2019 Global Journals

This page is intentionally left blank

© 2019 Global Journals

Global Journal of human-social science: G
Linguistics & Education
Volume 19 Issue 10 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-460X & Print ISSN: 0975-587X

# Behaviorism, Innatism, Cognitivism: Considering the Dominance to Provide Theoretical Underpinning of Language Acquisition Conjecture

By Tahmina Sultana
*Dhaka International University*

*Abstract-* The language specialists have discerned that language is a species-specific and a biologically determined scheme for the human beings. After a child is born, it goes under pre-linguistic and linguistic stages of language acquisition. Although there are many different approaches to learning, three basic kinds of learning theory are prominent, like Behaviourism, Innatism, and Cognitivism. All these theories centered around 'nature' and 'nurture' theories or on 'empiricism' and 'nativism' concepts. According to empirical research usually knowledge comes through experience from the environment. Nativism holds that at least some knowledge is not acquired from the environment but is genetically transmitted and innate. The theoreticians never agree or disagree with any of these theories, whether environmentalist or nativist. The principle focus of this study is to investigate the dominance among three main doctrines by delving into the fundamental differences among them. The specification of these theories is also given prominence in this article. Finally, in the findings session, it has been tried to trace the dominance of one particular theory, among others.

*Keywords:* *acquisition, innatism, behaviorism, cognitivism, nativism, empiricism.*

*GJHSS-G Classification:* *FOR Code: 200399*

BEHAVIORISMINNATISMCOGNITIVISMCONSIDERINGTHEDOMINANCETOPROVIDETHEORETICALUNDERPINNINGOFLANGUAGEACQUISITIONCONJECTURE

*Strictly as per the compliance and regulations of:*

Open Association of Research Society, USA
Research | Diversity | Ethics

© 2019. Tahmina Sultana. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

# Behaviorism, Innatism, Cognitivism: Considering the Dominance to Provide Theoretical Underpinning of Language Acquisition Conjecture

Tahmina Sultana

*Abstract-* The language specialists have discerned that language is a species-specific and a biologically determined scheme for the human beings. After a child is born, it goes under pre-linguistic and linguistic stages of language acquisition. Although there are many different approaches to learning, three basic kinds of learning theory are prominent, like Behaviourism, Innatism, and Cognitivism. All these theories centered around 'nature' and 'nurture' theories or on 'empiricism' and 'nativism' concepts. According to empirical research usually knowledge comes through experience from the environment. Nativism holds that at least some knowledge is not acquired from the environment but is genetically transmitted and innate. The theoreticians never agree or disagree with any of these theories, whether environmentalist or nativist. The principle focus of this study is to investigate the dominance among three main doctrines by delving into the fundamental differences among them. The specification of these theories is also given prominence in this article. Finally, in the findings session, it has been tried to trace the dominance of one particular theory, among others.

*Keywords: acquisition, innatism, behaviorism, cognitivism, nativism, empiricism.*

## I. Introduction

Language acquisition is the process by which humans acquire the capacity to perceive and comprehend language, as well as to produce and use words and sentences to communicate. The history of language learning theories is a great pendulum cycled from Skinnerian environmentalism to Piagetian constructivism to Chomskian innatism. Linguists Noam Chomsky and Eric Lenneberg, for half a century, have argued for the hypothesis that children have inborn capabilities that make the language learning possible. Evidence suggests that every individual has three recursive mechanisms that allow sentences to go indeterminately, like relativization, complementation, and coordination (Matilal, Bimal Krishna, 1990). Furthermore, there are actually two main guiding principles in the first-language acquisition, that is, speech perception always precedes speech production and the gradually evolving system by which a child learns a language is built up one step at a time, beginning with the distinction between individual phonemes (Fry, Dennis 1977).

In this study, it has been tried to find out a particular benchmark for fixing up the most acceptable answer for language acquisition procedures. In the field of language acquisition Behaviorism, Innatism, and Cognitivism theories are granted as the three most prominent schools of thought in providing a theoretical paradigm of language acquisition trail. Some critics are with the behavioral approach of language acquisition, some are with the innate or by the born capacity of a human child to achieve its first language, and some others are with the ability of cognition and perceptions. First of all, these three theories will be discussed as per their traits with criticisms in the discussion session. Some past works and findings will be focused on the literature review part to establish the authenticity of this study. And then, in the findings section, the dominant theory will be highlighted in relation to the other language acquisition theories.

## II. Literature Review

From some ancient observations we perceive that mapping of word meaning is innate. Additionally, Sanskrit grammarians debated for over twelve centuries whether humans' ability to recognize the meaning of words was god-given or passed down by previous generations and learned from already established conventions (Fry, Dennis 1977). In a more modern context, empiricists, like Thomas Hobbes and John Locke, argued that knowledge (and, for Locke, language) emerge ultimately from abstracted sense impressions. These arguments mainly supported that language is acquired through sensory experience (Kendra A. Palmer, 2009). Dissatisfaction with behaviorism's strict focus on observable behavior led educational psychologists such as Jean Piaget and William Perry to demand an approach to learning theory that paid more attention to "inside the learner's head." They developed a cognitive access that focused on mental processes rather than observable behavior (Dr. Barman Binoy, 2006). According to cognitive

*Author: Department of English, Dhaka International University, Banani, Dhaka, Bangladesh. e-mail: tssanjida@gmail.com*



© 2019 Global Journals

psychologists, 'meaning' plays an significant role in human learning. 'Learning' is a meaningful process of "relating new events or items to already existing cognitive concepts." (Brown, H.D.1987).

All these above literature are focusing on different patterns and techniques of learning a first language after a baby born. Behaviourism is emphasizing performance and behavior in successful learning, whereas Innatism is supporting by-born and natural pre-conceptions of a child to gain the language better than any other process. On the other hand, Cognitivism is highlighting the importance of meaning, and understanding. They focus on cognitive development, cultural background, and personal history to gain new knowledge rather than depending on passively absorbed behavioral repertoire. Each theory is logical and reasonable in their standpoint. That is why; still bewilderment exists in the field of first language acquisition regarding the most acceptable hypothesis to meet up the controversy. In this study it has been tried to pick up a satisfactory presumption among those three above mentioned speculations based on relevant logical analysis.

## III. Discussion

*a) Behaviourism*

According to Behaviorism, humans produce their behaviors in response to certain stimuli in the environment, including other factors like an individual's history reinforcement and punishment, an individual's current motivational state, and controlling stimuli. During the first half of the twentieth century, John B. Watson devised methodological behaviorism, which rejected introspective methods and sought to understand behavior by only measuring observable behaviors and events. It was not until the 1930s that B. F. Skinner suggested that private events—including thoughts and feelings—should be subjected to the same controlling variables as observable behavior, which became the basis for his philosophy called "radical behaviorism" (Chiesa, Mecca, 1994), (Dillenburger, 2009). While Watson and Ivan Pavlov investigated the stimulus-response procedures of classical conditioning, Skinner assessed the controlling nature of consequences and also its potential effect on the antecedents (or discriminative stimuli) that strengthens behavior; the technique became known as operant conditioning. Skinner's radical behaviorism has been highly successful experimentally, revealing new phenomena with new methods, but Skinner's dismissal of theory limited its development. Theoretical behaviorism recognized that an organism has a state as well as sensitivity to stimuli and the ability to emit responses (Staddon, John, 2014). Indeed, Skinner himself acknowledged the possibility of what he called "latent" reaction in humans, even though he neglected to extend this idea to rats and pigeons (Staddon, J, 2017). Latent responses constitute a repertoire, from which operant reinforcement can select.

i. *Varieties*

There is no universally agreed-upon classification, but some titles given to the various branches of behaviorism include:

(i) Methodological behaviorism: Watson's behaviorism states that one can only observe the public events (behaviors of an individual), and that therefore, one should ignore the private events (thoughts and feelings). (Skinner, BF, 1976) (Zalta, Edward N, 2006).

(ii) Radical behaviorism: B. F. Skinner's behaviorism theorizes that processes within the organism should be acknowledged, particularly the presence of private events (such as thoughts and feelings), and suggests that environmental variables also control these events just as they control observable behaviors. Willard Van Orman Quine used many of radical behaviorism's ideas in his study of knowledge and language (Skinner, BF, 1976).

(iii) Teleological behaviorism: Post-Skinnerian, purposive, close to microeconomics. It focuses on objective observation as opposed to cognitive processes.

(iv) Psychological behaviorism: As proposed by Arthur W. Staats, unlike the previous behaviorisms of Skinner, Hull, and Tolman, was based upon a program of individual research involving various types of human behavior. Psychological behaviorism introduces new principles of human learning.

(v) Inter behaviorism: Founded by Jacob Robert Kantor before Skinner's writings were formulated.

ii. *Operant conditioning*

Operant conditioning was developed by B.F. Skinner in 1937 and deals with the modification of "voluntary behavior" or operant behavior. Operant behavior operates on the environment and it follows its consequences. Reinforcement and punishment, the core tools of operant conditioning, are either positive (delivered following a response), or negative (withdrawn following a response) (Classical and Operant Conditioning - Behaviorist Theories, 2015). Skinner created the *Skinner Box* or operant conditioning chamber to test the effects of operant conditioning principles on rats. From this study, he discovered that the rats learned very effectively if one can reward them frequently. Skinner also found that he could shape the rats' behavior through the use of rewards, which could, in turn, be applied to human learning as well.

iii. *Classical conditioning*

Classical conditioning (or Pavlovian conditioning or respondent conditioning) is also an vital behavior-analytic process that need not refer to mental



© 2019 Global Journals

or other internal processes. Pavlov's experiments with dogs provide the most familiar example of the classical conditioning procedure. In simple conditioning, Pavlov presented a stimulus to the dog such as a light or a sound, and then food was placed in the dog's mouth. After a few repetitions of this sequence, the light or sound by itself caused the dog to salivate ("Ivan Pavlov." Retrieved 16 April 2012). The idea of classical conditioning helped behaviorist John Watson to discover the key mechanism behind how humans acquire the behaviors that they do to find a natural reflex that produces the response. Watson's "Behaviorist Manifesto" has three aspects that deserve special recognition: one is that psychology should be purely objective, with any interpretation of conscious, thus leading to psychology as the "science of behavior"; the second one is that the goals of psychology should be to predict and control behavior as opposed to describe and explain conscious mental states; the third one is that there is no notable distinction between human and non-human behavior. Following Darwin's theory of evolution, human behavior is just a more composite version with respect to the behavior displayed by other species. (Richard Gross, 2010)

## IV. Innatism

Innatism proposed that the human mind is born with prior knowledge and it is not a blank sheet of paper. According to this theory, environment, and attitude is not enough for a human child to process language or any other kinds of information. Here the nature is monumental than the role of nurture. Plato and Descartes are prominent philosophers in the development of innatism, and the notion that the mind is already born with ideas, sense, and beliefs (Tad M. Schmaltz, 2002). Both philosophers emphasize that experiences are the key to unlocking this knowledge but not the source of the knowledge itself. Basically, no learning is derived exclusively from one's wisdom as empiricists like John Locke suggested (Stich, S. P., 1975). According to Noam Chomsky, the grammatical faculty was built into the infant brain, and a child is a “linguistic genius” mastering the course of complex language within four years. Children are hypothesized to have an innate knowledge of the basic grammatical structure common to all human languages. In general usage, the terms *innatism* and *nativism* are synonymous as they both refer to notions of pre-existing thoughts present in mind. Innatism refers to the philosophy of Plato and Descartes, who assumed that a God or a similar being or process placed innate ideas and principles in the human mind (Tad M. Schmaltz, 2002). Nativism represents an adaptation of this, grounded in the fields of genetics, cognitive psychology, and psycholinguistics.

### *a) Innatism in Learning*

There are two ways in which animals can achieve information. The first of these two ways is learning when an animal gathers information about its surroundings and then proceeds to produce this information. For example, if an animal eats something that hurts its stomach, it has learned not to eat this again. The second way that an animal can acquire facts is through innate storage of facts. This knowledge is genetically inherited. The animal automatically knows it without any prior experience. An example of this is when a horse is born and can immediately walk. The horse has not learned this behavior rather achieves it automatically. (Dunlap Lehtila, 2013)

## V. Cognitivism

Cognitivism became the dominant force in psychology in the late-20th century, replacing behaviorism as the most popular paradigm for understanding mental function. Cognitive psychology is not a wholesale denial of behaviorism, but rather an expansion. The main issues that interest cognitive psychologists are the inner mechanisms of human thought and the processes of knowing. Cognitive psychologists have attempted to shed some light on the alleged mental structures that stand in a causal relationship to our physical actions.

Cognitive theory tends to focus on conceptualizing the student's learning process: how intimation is received, how intelligence is processed and organized into existing schema, and how individual can retrieve information. Cognitive approaches mainly focus on the mental activities of the learner like planning, goal setting, and organizational strategies (Shell, 1980). In cognitive theories, not only the environmental factors and instructional components play an essential role in learning. There are additional elements like learning to code, transform, rehearse, and store and retrieve the facts. The learning process includes learner’s thoughts, beliefs, and attitude values. Memory plays a vital role in the learning process. Usually, information stays within a memory in an organized, meaningful manner. Here, teachers and designers play different roles in the learning process. Teachers supposedly facilitate learning and the organization of information in an optimal way. Forgetting is an inability to retrieve information from memory. Memory loss may be a mechanism used to discard situationally irrelevant intelligence by assessing the relevance of new details. According to cognitive theory, if a learner knows how to implement knowledge in different contexts and conditions then we can say that the learner learns to transfer the pre-existing idea. (Schunk, 1991) Understanding is composed of knowledge - in the form of rules, concepts and discrimination (Duffy and Jonassen, 1991). Memory use prior idea to identify



© 2019 Global Journals

similarities and differences between itself and novel information.

*a) Some basic principles of Cognitive theory*

There are some specific assumptions or principles that direct the instructional design: active involvement of the learner in the learning process, learner control, cognitive training (e.g., self-planning, monitoring, and revising techniques), the use of hierarchical analyses to identify and illustrate prerequisite relationships (cognitive task analysis procedure), facilitating optimal processing of structuring, organizing and sequencing information (use of cognitive strategies such as outlining, summaries, synthesizers, advance organizers etc.), encouraging the students to make connections with previously learned material, and creating learning environments (recall of prerequisite skills; use of relevant examples, analogies).

## VI. Comparison among Behaviourism, Innatism and Cognitivism

*a) Philosophical debate*

Although individual human beings vary due to cultural, racial, linguistic, and era-specific influences, inborn ideas are said to belong to a more fundamental level of individual cognition. For example, the philosopher René Descartes theorized that knowledge of God is natural in everybody as a product of the faculty of faith. Other philosophers, most notably the empiricists, were critical of the theory and denied the existence of any innate ideas, saying all human knowledge depends on experience, rather than *a priori* reasoning.

Philosophically, the debate over innate ideas is central to the conflict between rationalist and empiricist epistemologies. While rationalists believe that some ideas exist before having any experience, empiricism claims that a baby gains knowledge from experience. Immanuel Kant was a German philosopher who is regarded as having ended the impasse in modern philosophy between rationalists, and empiricists and synthesized these two early modern traditions in his thought. Plato argues that if there are certain concepts that we know to be true but did not learn from experience, then it must be because we have an innate knowledge of it and this knowledge must have been gained before birth. The main antagonist to the concept of innate ideas is John Locke, a contemporary of Leibniz. Locke argued that the mind is, in fact, devoid of all knowledge or ideas at birth; it is a blank sheet or "*tabula rasa.*"

*b) Differences between Behaviorism and Innatism*

Skinner's behaviorist idea was stalwartly attacked by Noam Chomsky in a review article in 1959, calling it "largely mythology" and a "serious delusion"(Noam, Chomsky; Skinner, B. F., *1959).* Arguments against Skinner's idea of language acquisition through operant conditioning include the fact that children often ignore language corrections from adults. Instead, children typically follow a pattern of using an irregular form of a word properly, making errors later on, and eventually returning to the proper use of the word. For example, a child may correctly learn the word "gave" (past tense of "give"), and later on, use the word "gived." Eventually, the child will typically go back to learning the correct word, "gave". The pattern is difficult to attribute to Skinner's idea of operant conditioning as the primary way that children acquire language.

Chomsky argued that if a child would acquire language through behavioral conditioning, it would not likely learn the proper use of a word and suddenly use the word wrongly. (Harley, Trevor A., 2010) Chomsky believed that Skinner failed to account for the central role of syntactic knowledge in language competence. Chomsky also rejected the term "learning," which Skinner used to claim that children "learn" language through operant conditioning (Harris, Margaret, 1992). Instead, Chomsky argued for a mathematical approach to language acquisition that supports study of syntax.

In the second half of the 20th century, the influence of behaviorism was largely reducing as a result of the cognitive revolution (Saffran, Jenny R.,2003)(Saffran, Jenny; Aslin, Newport, 1996). This shift was due to methodological behaviorism being highly criticized for not examining mental processes and this led to the development of the cognitive therapy movement. In the mid-20th century, three main influences arose that would inspire and shape cognitive psychology as a formal school of thought:

(i) Noam Chomsky's 1959 critique of behaviorism, and empiricism more generally, initiated what would come to be known as the "cognitive revolution."
(ii) Developments in computer science would lead to parallels being drawn between human brain and the computational functionality of computers, opening entirely new areas of psychological thought. Allen Newell and Herbert Simon spent years developing the concept of artificial intelligence (AI) and later worked with cognitive psychologists regarding the implications of AI. The useful result was more of a framework conceptualization of mental functions with their counterparts in computers (memory, storage, retrieval, etc.)
(iii) Formal recognition of the field involved the establishment of research institutions such as George Mandler's Center for Human Information Processing in 1964. Mandler described the origins of cognitive psychology in a 2002 article in the *Journal of the History of the Behavioral Science (*Lany, Jill; Saffran, 2010).



© 2019 Global Journals

Skinner's behaviorism and Chomsky's innatism are very much contradictory when we judge them in terms of their individualistic theoretical bases. The theories, indeed, stress on two distinct hypotheses of language acquisition. This divergence has created a gulf between the theories. Several differences arise between the behaviourist and the innatist premise of language acquisition, which we can encapsulate in the following way:

| Behaviourism | Innatism |
|---|---|
| Acquisition is an outcome of experience | Acquisition is an outcome of condition |
| Acquisition is a stimulus response process | Acquisition is a congenital process |
| Children learn language by imitation | Children learn language by application |
| Language learning is practice-based | Language learning is rule-based |
| Language acquisition is the result of nurture | Language acquisition is the result of nature |
| Stresses on observable behavior | Stresses on internal thought processes |
| Human mind is a blank slate | Human mind is no tabula rasa |
| Knowledge exists outside of individuals | Knowledge exists inside individuals |
| Learning is determined by the environment | Learning is determined by the individual |
| Learning requires formal guidance | Learning requires no formal assistance |
| Considers the child as a passive recipient | Considers the child as an active participant |
| Language learning is a mechanical process | Language learning is a creative process |
| Is a theory of behaviour, not of knowledge | Is a theory of knowledge, not of behaviour |
| Language is akin to other forms of cognition | Language is a separate module |

Psychological research has recently progressed in the direction of regarding the human being like a mixture of genetically determined capacities and knowledge gained by experience (Konieczna). The human child, indeed acquires language from his/her environment by imitating behaviors of other members of society. But the innatist theory exclusively ignored this issue and viewed language acquisition as the unique product of LAD. Chomsky, the chief proponent of innatism, opined that exposure to language is a marginal prerequisite for the activation of the LAD, and is irrelevant to the actual learning process. But this innatist claim is not entirely satisfying because history (e.g., Genie, Victor) showed that the child cannot learn a language if he/she is isolated from society or human contact. Ruth Clark pointed out that: "Situation has a fuller role to play in language learning than Chomsky implies, though not precisely the role assigned to it by the behaviorists."

*c) Differences between Innatism and Cognitivism*

The neuroscientists found the evidence for innatism by working on the "Blue Brain Project." They discovered that neurons transmit signals despite an individual's experience. The linguists assumed that neuronal circuits are made when the experience of an individual is imprinted in the brain, making memories. Researchers at Blue Brain discovered a network of about fifty neurons. These neurons were like building blocks that contain difficult knowledge and later it would be added to acquired knowledge, like memory.[28] Scientists ran tests on the neuronal circuits of several rats and ascertained that if the neuronal circuits had only been formed based on an individual's experience, the tests would bring about very different characteristics for each rat. However, the rats all displayed similar characteristics as their neuronal circuits must have been established previously to their experiences–it must be inborn and created before their skill. The research done in the Blue Brain project expresses that some of the building blocks of all our knowledge are genetic, and we're born with it. (Pousaz, L., 2011)

## VII. Findings

Some immediate findings may come out of the above discussions. Human brain is an active organ that is pre-shaped naturally and the neuronal functions shape most of the language activities. Cognitivism goes for highlighting the role of intelligence and memory for the acquiring a language. Human brain is not an empty vessel to be filled up with experience after its birth. Language acquisition is a very conventional phenomenon in all the human civilizations. It is somehow possible due to the presence of an Innate Language Universal in human brain since its birth. Cognition, or sense or perception or consciousness or understanding is evident all human brain that is secondary to innate ability. Innate ability is fundamental to the human in general. It is universal that lets people



© 2019 Global Journals

gather knowledge of language in a simple manner. Behavioral scientists support behavior and interaction for successful language development, whereas innatism believes that innate ability is responsible for language acquisition since infancy. Behavioral conditioning and reinforcement facilitate learning that exhilarates the pre-existed inborn capacity of a child. Behavioral theory mainly focuses on communication, not on grammatical correctness. It emphasizes fluency rather than accuracy. Whereas, innatism proposes "Universal Grammar Pattern." This theory claims that the deep structure of language at its deepest level may be universal to all languages. It also propounds a set of rules that would explain how children acquire their first language or how they construct valid sentences. Here Chomsky presented the existence of formal universals and substantial universals.[6] Chomsky is exceptional in this regard with innatist ideology and had protested Behaviorism strongly. He proposed that adult speech is so speedy and poorly constructed that it would be difficult for a child to learn a complete language so fast if it wouldn't have any prior neurological setup.

Chomsky's idea of Innatism has been empirically tested, discussed, and criticized since long and this doctrine achieved popularity more than others. Nature is more important than nurture according to the theory of innatism. Innatism is more authentic in the case of the Critical Period Hypothesis by Eric Lenneberg, (1964) who stated that if anyone doesn't learn a language before the age of 12, it could be most difficult to acquire any language in a usual and fully functional sense. Environment and conditioning will not function here anymore. Preexisting notion present in our mind is genetically preprogrammed according to the field of genetics, cognitive psychology, and psycholinguistics. The proposition of "Language Acquisition Device" (LAD) by Chomsky is another fruitful explanation in favour of innatism that offered how children develop competence in their first language in a relatively short time. Chomsky cleared it more by saying that Black Box or LAD is situated in Broca's area on the left side of the human brain. A complex set of neural circuits of this area are connected with universal grammar. Innatism is the focal point of interest of the linguists as this philosophy is highly logical and scientific. And if anything is scientific, its acceptability will be high. We know language in infancy is acquired rather than learned; children learn languages following some subtle and abstract principles. Explicit instructions or any other environmental clues don't have that much impact on language acquisition. Critics argued that no theory is absolutely standard to meet up the dispute regarding child language acquisition. Innatism can minimize much of the existing debates than the other theories.

## VIII. Conclusion

It is nearly about two thousand years the conflict between nativism, and empiricism has been started. Empiricism is wrong since it tries to construct the mind out of nothing and Nativism is wrong for its attempts to make untestable assumptions about genetics and unreasonable proposals regarding the hard-coding of complex formal rules in neural tissue (Mac Whinny, 2005). On the other hand, the environmentalists who view language as 'genetically endowed and readymade' (Lightbown and Spada, 1999). Basically all of the chief language acquisition theories are focusing on the process of children's first language adaptation. Truly no theory could solely be successful in unlocking the language acquisition mystery at a time. Partial fulfillment is possible in these perspectives. In fact, there is a gulf of differences between theory and practice in the study on language advancement. Behavioral, and environmental theories are tended to highlight the parental and societal nurturing issues. But the empirical researchers found that there is little impact of adult speech and adult pressure on child language acquisition. Brown, Cazden and Bellugi (1969) and Brown and Hanlon (1970) have shown that parents' correction of children's ungrammatical sentences does not play a part in children's linguistic development. Specific cognitive or innate capacity in man is essential for learning. It is somehow logical to say that children are naturally conditioned rather than environmentally.

## References Références Referencias


1. Matilal, Bimal Krishna, 1990, *The word and the world: India's contribution to the study of language. Oxford (Oxford shire): Oxford University Press.*
2. Fry, Dennis 1977, *Homo loquens, Man as a talking animal.* Cambridge University Press.
3. Kendra A. Palmer, 2009, "*Understanding Human Language: An In-Depth Exploration of the Human Facility for Language", StudentPulse.com. Retrieved 22 August 2012.*
4. Dr. Barman Binoy et all, 2006, *ELT-Theory And Practice*, Friends' Book Corner.
5. Chiesa, Mecca, 1994, *Radical Behaviorism: The Philosophy and the Science*, Authors Cooperative.
6. Dillenburger, Karola & Keenan, Mickey, 2009, "*None of the As in ABA stand for autism: Dispelling the myths",* Journal of Intellectual and Developmental Disability.
7. Staddon, John, 2014, *The New Behaviorism (2nd edition),* Philadelphia, PA: Psychology Press.
8. Staddon, J, 2017, *Theoretical behaviorism. Philosophy and Behavior*, Cambridge Center for Behavioral Studies.
9. Skinner, BF, 1976, *About Behaviorism*, New York: Random House, Inc.




© 2019 Global Journals

10. Zalta, Edward N, 2006, "*Behaviorism*", Stanford Encyclopedia of Philosophy*:* A university/library partnership in support of scholarly communication and open access.
11. "*Classical and Operant Conditioning - Behaviorist Theories*", 2015-06-19*, Learning Theories.* Retrieved 2017-08-04.
12. "*Ivan Pavlov*". *Retrieved 16 April 2012.*
13. Richard Gross, 2010, *Psychology: The Science of Mind and Behaviour*, Published by Hodder Education Publishers.
14. Tad M. Schmaltz, 2002, *Radical Cartesianism: The French Reception of Descartes*, Cambridge University Press.
15. Stich, S. P., 1975, *Innate Ideas*, Berkley, CA: University of California Press.
16. Dunlap Lehtila, Archived 2013-11-13 at the Wayback Machine.
17. Noam, Chomsky; Skinner, B. F., *1959, "A Review of B. F. Skinner's Verbal Behavior", Language.*
18. Harley, Trevor A., 2010, *Talking the Talk: Language, Psychology and Science,* New York, NY: Psychology Press.
19. Harris, Margaret, 1992*, Language Experience and Early Language Development: From Input to Uptake,* UK: Psychology Press.
20. Saffran, Jenny R., 2003*,* "*Statistical language learning: mechanisms and constraints*"*,* Current Directions in Psychological Science.
21. Saffran, Jenny; Aslin, Newport, 1996, "*Statistical learning by 8-month-old infants*"*, Science.*
22. Lany, Jill; Saffran, 2010, "*From Statistics to Meaning: Infants*' *Acquisition of Lexical Categories*"*,* Psychological Science.
23. Pousaz, L., 2011, *New evidence for innate knowledge*. Routledge Taylor & Francis Group.



© 2019 Global Journals

# Global Journals Guidelines Handbook 2019

www.GlobalJournals.org

# FELLOWS

## FELLOW OF ASSOCIATION OF RESEARCH SOCIETY IN HUMAN SCIENCE (FARSHS)

Global Journals Incorporate (USA) is accredited by Open Association of Research Society (OARS), U.S.A and in turn, awards "FARSHS" title to individuals. The 'FARSHS' title is accorded to a selected professional after the approval of the Editor-in-Chief/Editorial Board Members/Dean.



- The "FARSHS" is a dignified title which is accorded to a person's name viz. Dr. John E. Hall, Ph.D., FARSS or William Walldroff, M.S., FARSHS.

FARSHS accrediting is an honor. It authenticates your research activities. After recognition as FARSHS, you can add 'FARSHS' title with your name as you use this recognition as additional suffix to your status. This will definitely enhance and add more value and repute to your name. You may use it on your professional Counseling Materials such as CV, Resume, and Visiting Card etc.

*The following benefits can be availed by you only for next three years from the date of certification:*

FARSHS designated members are entitled to avail a 40% discount while publishing their research papers (of a single author) with Global Journals Incorporation (USA), if the same is accepted by Editorial Board/Peer Reviewers. If you are a main author or co-author in case of multiple authors, you will be entitled to avail discount of 10%.

Once FARSHS title is accorded, the Fellow is authorized to organize symposium/seminar/conference on behalf of Global Journal Incorporation (USA). The Fellow can also participate in conference/seminar/symposium organized by another institution as representative of Global Journal. In both the cases, it is mandatory for him to discuss with us and obtain our consent.





You may join as member of the Editorial Board of Global Journals Incorporation (USA) after successful completion of three years as Fellow and as Peer Reviewer. In addition, it is also desirable that you should organize seminar/symposium/conference at least once.

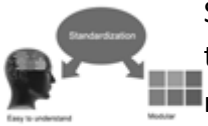
We shall provide you intimation regarding launching of e-version of journal of your stream time to time.This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.



The FARSHS can go through standards of OARS. You can also play vital role if you have any suggestions so that proper amendment can take place to improve the same for the benefit of entire research community.

As FARSHS, you will be given a renowned, secure and free professional email address with 100 GB of space e.g. johnhall@globaljournals.org. This will include Webmail, Spam Assassin, Email Forwarders,Auto-Responders, Email Delivery Route tracing, etc.






The FARSHS will be eligible for a free application of standardization of their researches. Standardization of research will be subject to acceptability within stipulated norms as the next step after publishing in a journal. We shall depute a team of specialized research professionals who will render their services for elevating your researches to next higher level, which is worldwide open standardization.

The FARSHS member can apply for grading and certification of standards of the educational and Institutional Degrees to Open Association of Research, Society U.S.A.
Once you are designated as FARSHS, you may send us a scanned copy of all of your credentials. OARS will verify, grade and certify them. This will be based on your academic records, quality of research papers published by you, and some more criteria. After certification of all your credentials by OARS, they will be published on your Fellow Profile link on website https://associationofresearch.org which will be helpful to upgrade the dignity.




The FARSHS members can avail the benefits of free research podcasting in Global Research Radio with their research documents. After publishing the work, (including published elsewhere worldwide with proper authorization) you can upload your research paper with your recorded voice or you can utilize chargeable services of our professional RJs to record your paper in their voice on request.




The FARSHS member also entitled to get the benefits of free research podcasting of their research documents through video clips. We can also streamline your conference videos and display your slides/ online slides and online research video clips at reasonable charges, on request.



The FARSHS is eligible to earn from sales proceeds of his/her researches/reference/review Books or literature, while publishing with Global Journals. The FARSHS can decide whether he/she would like to publish his/her research in a closed manner. In this case, whenever readers purchase that individual research paper for reading, maximum 60% of its profit earned as royalty by Global Journals, will be credited to his/her bank account. The entire entitled amount will be credited to his/her bank account exceeding limit of minimum fixed balance. There is no minimum time limit for collection. The FARSS member can decide its price and we can help in making the right decision.

The FARSHS member is eligible to join as a paid peer reviewer at Global Journals Incorporation (USA) and can get remuneration of 15% of author fees, taken from the author of a respective paper. After reviewing 5 or more papers you can request to transfer the amount to your bank account.



## MEMBER OF ASSOCIATION OF RESEARCH SOCIETY IN HUMAN SCIENCE (MARSHS)

The ' MARSHS ' title is accorded to a selected professional after the approval of the Editor-in-Chief / Editorial Board Members/Dean.



The "MARSHS" is a dignified ornament which is accorded to a person's name viz. Dr John E. Hall, Ph.D., MARSHS or William Walldroff, M.S., MARSHS.

MARSHS accrediting is an honor. It authenticates your research activities. Afterbecoming MARSHS, you can add 'MARSHS' title with your name as you use this recognition as additional suffix to your status. This will definitely enhance and add more value and repute to your name. You may use it on your professional Counseling Materials such as CV, Resume, Visiting Card and Name Plate etc.

*The following benefitscan be availed by you only for next three years from the date of certification.*




MARSHS designated members are entitled to avail a 25% discount while publishing their research papers (of a single author) in Global Journals Inc., if the same is accepted by our Editorial Board and Peer Reviewers. If you are a main author or co-author of a group of authors, you will get discount of 10%.

As MARSHS, you willbegiven a renowned, secure and free professional email address with 30 GB of space e.g. johnhall@globaljournals.org. This will include Webmail, Spam Assassin, Email Forwarders,Auto-Responders, Email Delivery Route tracing, etc.






We shall provide you intimation regarding launching of e-version of journal of your stream time to time.This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.

The MARSHS member can apply for approval, grading and certification of standards of their educational and Institutional Degrees to Open Association of Research, Society U.S.A.






Once you are designated as MARSHS, you may send us a scanned copy of all of your credentials. OARS will verify, grade and certify them. This will be based on your academic records, quality of research papers published by you, and some more criteria.

It is mandatory to read all terms and conditions carefully.

© Copyright by Global Journals | Guidelines Handbook

# AUXILIARY MEMBERSHIPS

## Institutional Fellow of Open Association of Research Society (USA) - OARS (USA)

Global Journals Incorporation (USA) is accredited by Open Association of Research Society, U.S.A (OARS) and in turn, affiliates research institutions as "Institutional Fellow of Open Association of Research Society" (IFOARS).



The "FARSC" is a dignified title which is accorded to a person's name viz. Dr. John E. Hall, Ph.D., FARSC or William Walldroff, M.S., FARSC.

The IFOARS institution is entitled to form a Board comprised of one Chairperson and three to five board members preferably from different streams. The Board will be recognized as "Institutional Board of Open Association of Research Society"-(IBOARS).

*The Institute will be entitled to following benefits:*

The IBOARS can initially review research papers of their institute and recommend them to publish with respective journal of Global Journals. It can also review the papers of other institutions after obtaining our consent. The second review will be done by peer reviewer of Global Journals Incorporation (USA) The Board is at liberty to appoint a peer reviewer with the approval of chairperson after consulting us.

The author fees of such paper may be waived off up to 40%.

The Global Journals Incorporation (USA) at its discretion can also refer double blind peer reviewed paper at their end to the board for the verification and to get recommendation for final stage of acceptance of publication.





The IBOARS can organize symposium/seminar/conference in their country on behalf of Global Journals Incorporation (USA)-OARS (USA). The terms and conditions can be discussed separately.

The Board can also play vital role by exploring and giving valuable suggestions regarding the Standards of "Open Association of Research Society, U.S.A (OARS)" so that proper amendment can take place for the benefit of entire research community. We shall provide details of particular standard only on receipt of request from the Board.




The board members can also join us as Individual Fellow with 40% discount on total fees applicable to Individual Fellow. They will be entitled to avail all the benefits as declared. Please visit Individual Fellow-sub menu of GlobalJournals.org to have more relevant details.

We shall provide you intimation regarding launching of e-version of journal of your stream time to time. This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.




After nomination of your institution as "Institutional Fellow" and constantly functioning successfully for one year, we can consider giving recognition to your institute to function as Regional/Zonal office on our behalf.
The board can also take up the additional allied activities for betterment after our consultation.

**The following entitlements are applicable to individual Fellows:**




Open Association of Research Society, U.S.A (OARS) By-laws states that an individual Fellow may use the designations as applicable, or the corresponding initials. The Credentials of individual Fellow and Associate designations signify that the individual has gained knowledge of the fundamental concepts. One is magnanimous and proficient in an expertise course covering the professional code of conduct, and follows recognized standards of practice.

Open Association of Research Society (US)/ Global Journals Incorporation (USA), as described in Corporate Statements, are educational, research publishing and professional membership organizations. Achieving our individual Fellow or Associate status is based mainly on meeting stated educational research requirements.



Disbursement of 40% Royalty earned through Global Journals : Researcher = 50%, Peer Reviewer = 37.50%, Institution = 12.50% E.g. Out of 40%, the 20% benefit should be passed on to researcher, 15 % benefit towards remuneration should be given to a reviewer and remaining 5% is to be retained by the institution.

We shall provide print version of 12 issues of any three journals [as per your requirement] out of our 38 journals worth $ 2376 USD.

**Other:**

**The individual Fellow and Associate designations accredited by Open Association of Research Society (US) credentials signify guarantees following achievements:**

- The professional accredited with Fellow honor, is entitled to various benefits viz. name, fame, honor, regular flow of income, secured bright future, social status etc.

- In addition to above, if one is single author, then entitled to 40% discount on publishing research paper and can get 10%discount if one is co-author or main author among group of authors.
- The Fellow can organize symposium/seminar/conference on behalf of Global Journals Incorporation (USA) and he/she can also attend the same organized by other institutes on behalf of Global Journals.
- The Fellow can become member of Editorial Board Member after completing 3yrs.
- The Fellow can earn 60% of sales proceeds from the sale of reference/review books/literature/publishing of research paper.
- Fellow can also join as paid peer reviewer and earn 15% remuneration of author charges and can also get an opportunity to join as member of the Editorial Board of Global Journals Incorporation (USA)
- • This individual has learned the basic methods of applying those concepts and techniques to common challenging situations. This individual has further demonstrated an in–depth understanding of the application of suitable techniques to a particular area of research practice.

**Note :**

"

- In future, if the board feels the necessity to change any board member, the same can be done with the consent of the chairperson along with anyone board member without our approval.
- In case, the chairperson needs to be replaced then consent of 2/3rd board members are required and they are also required to jointly pass the resolution copy of which should be sent to us. In such case, it will be compulsory to obtain our approval before replacement.
- In case of "Difference of Opinion [if any]" among the Board members, our decision will be final and binding to everyone.

"

# Preferred Author Guidelines

**We accept the manuscript submissions in any standard (generic) format.**

We typeset manuscripts using advanced typesetting tools like Adobe In Design, CorelDraw, TeXnicCenter, and TeXStudio. We usually recommend authors submit their research using any standard format they are comfortable with, and let Global Journals do the rest.

Alternatively, you can download our basic template from https://globaljournals.org/Template.zip

Authors should submit their complete paper/article, including text illustrations, graphics, conclusions, artwork, and tables. Authors who are not able to submit manuscript using the form above can email the manuscript department at submit@globaljournals.org or get in touch with chiefeditor@globaljournals.org if they wish to send the abstract before submission.

## Before and during Submission

Authors must ensure the information provided during the submission of a paper is authentic. Please go through the following checklist before submitting:

1. Authors must go through the complete author guideline and understand and *agree to Global Journals' ethics and code of conduct,* along with author responsibilities.
2. Authors must accept the privacy policy, terms, and conditions of Global Journals.
3. Ensure corresponding author's email address and postal address are accurate and reachable.
4. Manuscript to be submitted must include keywords, an abstract, a paper title, co-author(s') names and details (email address, name, phone number, and institution), figures and illustrations in vector format including appropriate captions, tables, including titles and footnotes, a conclusion, results, acknowledgments and references.
5. Authors should submit paper in a ZIP archive if any supplementary files are required along with the paper.
6. Proper permissions must be acquired for the use of any copyrighted material.
7. Manuscript submitted *must not have been submitted or published elsewhere* and all authors must be aware of the submission.

**Declaration of Conflicts of Interest**

It is required for authors to declare all financial, institutional, and personal relationships with other individuals and organizations that could influence (bias) their research.

## Policy on Plagiarism

Plagiarism is not acceptable in Global Journals submissions at all.

Plagiarized content will not be considered for publication. We reserve the right to inform authors' institutions about plagiarism detected either before or after publication. If plagiarism is identified, we will follow COPE guidelines:

Authors are solely responsible for all the plagiarism that is found. The author must not fabricate, falsify or plagiarize existing research data. The following, if copied, will be considered plagiarism:

- Words (language)
- Ideas
- Findings
- Writings
- Diagrams
- Graphs
- Illustrations
- Lectures

- Printed material
- Graphic representations
- Computer programs
- Electronic material
- Any other original work

## Authorship Policies

Global Journals follows the definition of authorship set up by the Open Association of Research Society, USA. According to its guidelines, authorship criteria must be based on:

1. Substantial contributions to the conception and acquisition of data, analysis, and interpretation of findings.
2. Drafting the paper and revising it critically regarding important academic content.
3. Final approval of the version of the paper to be published.

**Changes in Authorship**

The corresponding author should mention the name and complete details of all co-authors during submission and in manuscript. We support addition, rearrangement, manipulation, and deletions in authors list till the early view publication of the journal. We expect that corresponding author will notify all co-authors of submission. We follow COPE guidelines for changes in authorship.

**Copyright**

During submission of the manuscript, the author is confirming an exclusive license agreement with Global Journals which gives Global Journals the authority to reproduce, reuse, and republish authors' research. We also believe in flexible copyright terms where copyright may remain with authors/employers/institutions as well. Contact your editor after acceptance to choose your copyright policy. You may follow this form for copyright transfers.

**Appealing Decisions**

Unless specified in the notification, the Editorial Board's decision on publication of the paper is final and cannot be appealed before making the major change in the manuscript.

**Acknowledgments**

Contributors to the research other than authors credited should be mentioned in Acknowledgments. The source of funding for the research can be included. Suppliers of resources may be mentioned along with their addresses.

**Declaration of funding sources**

Global Journals is in partnership with various universities, laboratories, and other institutions worldwide in the research domain. Authors are requested to disclose their source of funding during every stage of their research, such as making analysis, performing laboratory operations, computing data, and using institutional resources, from writing an article to its submission. This will also help authors to get reimbursements by requesting an open access publication letter from Global Journals and submitting to the respective funding source.

## Preparing your Manuscript

Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.

***Manuscript Style Instruction (Optional)***

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11'", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

***Structure and Format of Manuscript***

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

a) A title which should be relevant to the theme of the paper.
b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
d) An introduction, giving fundamental background objectives.
e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
f) Results which should be presented concisely by well-designed tables and figures.
g) Suitable statistical data should also be given.
h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
j) There should be brief acknowledgments.
k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.



## Format Structure

***It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.***

All manuscripts submitted to Global Journals should include:

**Title**

The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

**Author details**

The full postal address of any related author(s) must be specified.

**Abstract**

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

**Keywords**

A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, “What words would a source have to include to be truly valuable in a research paper?” Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

**Numerical Methods**

Numerical methods used should be transparent and, where appropriate, supported by references.

**Abbreviations**

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

**Formulas and equations**

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

**Tables, Figures, and Figure Legends**

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.

**Figures**

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

## Preparation of Eletronic Figures for Publication

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

Color charges: Authors are advised to pay the full cost for the reproduction of their color artwork. Hence, please note that if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a Color Work Agreement form before your paper can be published. Also, you can email your editor to remove the color fee after acceptance of the paper.

## Tips for writing a good quality Social Science Research Paper

Techniques for writing a good quality homan social science research paper:

***1. Choosing the topic***: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

***2. Think like evaluators:*** If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

***3. Ask your guides:*** If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

***4. Use of computer is recommended:*** As you are doing research in the field of homan social science then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

***5. Use the internet for help:*** An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.



***6. Bookmarks are useful:*** When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

***7. Revise what you wrote:*** When you write anything, always read it, summarize it, and then finalize it.

***8. Make every effort:*** Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

***9. Produce good diagrams of your own:*** Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

***10. Use proper verb tense:*** Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

***11. Pick a good study spot:*** Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

***12. Know what you know:*** Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

***13. Use good grammar:*** Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.

Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

***14. Arrangement of information:*** Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

***15. Never start at the last minute:*** Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

***16. Multitasking in research is not good:*** Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

***17. Never copy others' work:*** Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

***18. Go to seminars:*** Attend seminars if the topic is relevant to your research area. Utilize all your resources.
Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

***19. Think technically:*** Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.

***20. Adding unnecessary information:*** Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

***21. Report concluded results:*** Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

***22. Upon conclusion:*** Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

.

## Informal Guidelines of Research Paper Writing

***Key points to remember:***

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

**Final points:**

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

*The introduction:* This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

**The discussion section:**

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

**General style:**

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

**To make a paper clear:** Adhere to recommended page limits.



© Copyright by Global Journals | Guidelines Handbook

*Mistakes to avoid:*

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.
- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

**Title page:**

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

**Abstract:** This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

*Reason for writing the article—theory, overall issue, purpose.*

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

**Approach:**

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

**Introduction:**

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

*The following approach can create a valuable beginning:*

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.

**Approach:**

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

**Procedures (methods and materials):**

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

**Materials:**

*Materials may be reported in part of a section or else they may be recognized along with your measures.*

**Methods:**

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

**Approach:**

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

**What to keep away from:**

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.



© Copyright by Global Journals | Guidelines Handbook

**Results:**

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.

**Content:**

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

**What to stay away from:**

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

**Approach:**

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

**Figures and tables:**

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

**Discussion:**

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

**Approach:**

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

## The Administration Rules

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

*Please read the following rules and regulations carefully before submitting your research paper to Global Journals Inc. to avoid rejection*.

*Segment draft and final research paper:* You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

*Written material:* You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.

## Criterion for Grading a Research Paper (Compilation) by Global Journals

**Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals**

| Topics | Grades | | |
|---|---|---|---|
| | **A-B** | **C-D** | **E-F** |
| ***Abstract*** | Clear and concise with appropriate content, Correct format. 200 words or below | Unclear summary and no specific data, Incorrect form<br><br>Above 200 words | No specific data with ambiguous information<br><br>Above 250 words |
| ***Introduction*** | Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited | Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter | Out of place depth and content, hazy format |
| ***Methods and Procedures*** | Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads | Difficult to comprehend with embarrassed text, too much explanation but completed | Incorrect and unorganized structure with hazy meaning |
| ***Result*** | Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake | Complete and embarrassed text, difficult to comprehend | Irregular format with wrong facts and figures |
| ***Discussion*** | Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited | Wordy, unclear conclusion, spurious | Conclusion is not cited, unorganized, difficult to comprehend |
| ***References*** | Complete and correct format, well organized | Beside the point, Incomplete | Wrong format and structuring |

# INDEX


***A***

Adolescence · 58, 59, 61
Aphrodite · 56

***E***

Ecstasy · 56
Empiricism' · 64
Extraneous · 36

***I***

Instinct · 54
Intrinsic · 62

***L***

Lacunae · 3, 18
Lexical · 38, 43, 53

***M***

Morphemic · 36
Morphosyntactic · 18
Multisyllabic · 41

***O***

Orthographical · 40, 41

***P***

Predominant · 36, 42
Prophetic · 56
Puritanical · 56

***R***

Repertoire · 65
Repulsion · 56
Resurrection · 56
Rhetorical · 7, 9

***S***

Snafuing · 41
Succinct · 4
Succumbs · 55
Symptom · 58

***T***

Taxonomy · 37
Trajectories · 61, 63



save our planet



# Global Journal of Human Social Science

Visit us on the Web at www.GlobalJournals.org | www.SocialScienceResearch.org
or email us at helpdesk@globaljournals.org



ISSN 975587

© Global Journals