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INFORME FINAL DEL PROYECTO

TEMA:

“IMPLEMENTATION OF SCAFFOLDING METHODOLOGY IN ACADEMIC WRITING FOR IMPROVING THE REDACTION IN ENGLISH ABOUT PRELIMINARY PUBLICATIONS APPLIED TO STUDENTS ENROLLED IN 5TH ENGLISH LEVEL AT CENTRO ACADÉMICO DE IDIOMAS-(CAI) AT UNIVERSIDAD TÉCNICA DEL NORTE-IBARRA-ECUADOR.”

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ESPAÑOL-INGLÉS

LÍNEA DE INVESTIGACIÓN:

Innovación metodológica de la enseñanza del inglés

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Ibarra, 16 Enero 2018

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CERTIFICA

Haber revisado el presente informe final de investigación, el cual se ajusta a las normas vigentes en la Escuela de Ciencias de la Educación (CCEE), de la Pontificia Universidad Católica del Ecuador Sede Ibarra (PUCE-SI); en consecuencia, autorizo su presentación para los fines legales pertinentes.

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RESUMEN

El objetivo de esta investigación fue la implementación de la metodología Scaffolding como apoyo para el mejoramiento de la redacción académica enfocada en la escritura de publicaciones preliminares o abstracts de estudiantes universitarios de 5to nivel de inglés que culminan sus carreras y cuyos abstracts carecen del rigor científico que aquellos presentados por científicos o expertos en investigación. A través de la metodología Scaffolding se aplicaron tres rúbricas formativas que categorizaron tres etapas durante la investigación: auto-reflexión, evaluación en pares and auto-evaluación, aplicadas independientemente en fase inicial, intermedia y final para brindar un apoyo sostenido en el programa creado para la redacción académica de Abstracts. Se evidenciaron múltiples problemas basados en el razonamiento transductivo y la falta de entrenamiento para la redacción de Abstracts dentro del programa académico contemplado para el último nivel de inglés de estudiantes de diferentes facultades de la Universidad Técnica del Norte-UTN en la ciudad de Ibarra. Adicionalmente, se creó un protocolo de redacción de publicaciones preliminares que al ser aplicado permitió a los 264 estudiantes representantes de la muestra poblacional, seguir una guía acorde a las fases contempladas en la metodología Scaffolding, un organizado proceso en secuencia para reconocer la micro estructura donde se contempló el estilo de redacción y la macro estructura donde se analizaron las disciplinas académicas para redactar un abstract o publicación preliminar de una investigación realizada a nivel de educación Superior.

Palabras clave: Scaffolding, Rúbrica formativa, Redacción académica, Abstract, publicación preliminar, protocolo, investigación.

ABSTRACT

The objective of this research was the implementation of the Scaffold methodology as a support for the improvement of the academic writing focused on the writing of preliminary publications or Abstracts written by university students enrolled in 5th level who complete their degrees and whose abstracts have lack of Scientific rigor than those presented by scientists or research experts. Through the Scaffolding methodology, three formative rubrics were applied, which were categorized into three stages of research: self-reflection, peer evaluation and self-evaluation, applied independently in the initial, intermediate and final phases to provide sustained support in the program created for writing Scholarly Abstracts. It was evidenced multiple problems based on transductive reasoning and lack of training for the redaction of Abstracts in an academic program contemplated for the students enrolled in the last English level of different faculties at Universidad Técnica del Norte – UTN in Ibarra city. Additionally, it was created a protocol as a guideline for writing preliminary publications that were applied on 264 students who represented the population sample, and who followed a guide according to the phases contemplated in the methodology Scaffolding, an organized process in sequence to recognize the micro structure where was analyzed the style of writing and macro structure where the academic disciplines were studied to write an Abstract or preliminary publication of a research carried out at higher educational level.

Key words: Scaffolding, Formative rubric, Academic writing, Summary, preliminary publication, protocol, research.

DEDICATION

Cada peldaño de vida u obstáculo superado con esfuerzo, lágrimas y noches de arduo trabajo para culminar este significativo proyecto fueron solamente los recursos requeridos para poder presentar el producto final de horas de investigación a la sociedad nacional e internacional conformada por amigos queridos, familiares, madre y hermanos que con sus oraciones y frases de motivación estuvieron durante todo el trayecto para alcanzar una meta de índole educativo y afectivo. Por el valioso tiempo compartido mientras duraba el proyecto, por la paciencia, por su bonhomía, amor sincero, por ser el motor inspirador con plétora de afectividad que logró salvarme de renunciar a mis metas primarias y que fueran inmarcesibles, a mis amados hijos Zofai y Jonan, mis ángeles hermosos que iluminan cada paso de mi caminar y por quienes este proyecto profesional y de vida tiene un sentido más significativo. En fin, a todos quienes de una u otra forma me mostraron la verdadera prelación de un profesional bilingüe del área de lingüística que tiene un rol activo dentro de la sociedad globalizada y digital del siglo XXI sedienta de afectividad, inspiración e innovación en las aulas.

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INTRODUCTION

After working since 2011 in higher educational level specifically in some Universities from Coast and Highland region too, it was detected through observational methods, that university students normally do not participate in programs for improving academic writing in English for presenting their final thesis or projects previous to conclude their studies. This research was presented as an alternative to offer the improvement in Academic writing through Scaffolding methodology which is aligned to support the acquisition of knowledge step by step. Scaffolding methodology entails to help learners to acquire a new skill with a strong support in the initial stage and gradually this support should diminish when learners have developed deeply their goals or learning outcomes. During this process, specific educational resources must be included for making sure students are able to write in English (a productive skill) one of the seemingly easiest documents in a final project known as abstract or preliminary publications due to lack of scientist rigor for publishing in recognized worldwide databases or journals. The main purpose of this research was to implement Scaffolding methodology for improving academic writing of preliminary publications or abstracts of undergraduate students who do not have a specific program supported with formative rubrics for assessing their progress in several stages like initial, intermediate and final. So, it was applied a formative rubric per period with individual criteria based on the activities organized for supporting students. Additionally, it was required to create and apply a protocol as a resource for helping students and teachers to guide them in this crucial development of a productive skill in a second language offering the chance to make an evident improvement for analyzing individually abstracts and also in peers in collaborative work using the rubrics presented previously for getting familiar with the criteria. Lastly, the results showed that although some teachers did not consider relevant to prepare a program for supporting universities students in this process of academic writing, they strongly supported the relevance for participating in programs like this in which they were involved after seeing their improvement in this productive ability for writing abstracts.

CHAPTER I

THEORETICAL FRAMEWORK

1.1. WRITING

According to For Mackiewicz, J. & Kramer, I. (2014) Writing is an open -world domain task. Nowadays, writing has had many changes due to plenty of challenges which appeared owing to the fact that society has been evolving for achieving new indicators. According to independent educational levels, developing writing skills have to be applied based on the specific human stages selected per ages. In initial stages, students from Elementary School are able to write basic ideas for communicating. In intermediate stages, students enrolled in High School should write and communicate with a vocabulary more consistent. In advanced stages at University, students in higher levels have be able to communicate with more complex vocabulary using an Academic writing focus on Science. (Cambridge University, 2011).

In this context, first evidences associated to Scientific or Scholarly writing were established in London inspired by the Royal Society in the 14th century. Thomas Sprat in 1667 wrote "History of a royal society in London " and as a enemy of this society, indicated to write without embellishment, with a style for readers such as merchants, artisans and people from rural areas, while Robert Boyle in 1661, through his book " Certain physiological essays written at distant times, and on several occasions" showed in a practical way the relevance for writing and to show the information to the reader using an educated lexicon in a scientific style. (Harmon, J., Gross, A. 2007).

1.1.1. COMMUNICATION AND WRITING

As Common European Framework defines it, writing is a primary activity of production due to it is required interaction for developing and demonstrating its proficiency. (Cambridge University -2011). Experts as Gibbons, P. (2015) refers that the communication relies according to the contextual features such as: Field, Tenor and mode. These variables are recognized as register of a text:

- a) Field consists to the theme of the text in our case written,

- b) Tenor relies on the stage of the formality needed based on the relationship between the reader and writer.
- c) Mode consists in the way for communicating a written document.
- d) These contextual features can be properly managed according to developmental and social process in which students are involved.

1.1.2. WRITING : EDUCATIONAL STAGES

According to Deane, M., Guasch, T. (2015) writing has a conception focused on conveying thoughts, developing language, knowledge and, promoting thinking as a learning tool. Common European Framework (CEFR) as the International Organization which has regulated Languages, basically focused on English as a second language, allows classifying by different levels and criteria for evaluating the knowledge which students need to acquire and manage based on formal Academic knowledge. According to CEFR- Common European Framework, these stages begin from beginners A1 to Advanced C2, in total 6 levels. (Cambridge University 2011) The main characteristics are going to be presented in the next section:

SCALING SYSTEM (According to CEFR)

Beginner-Basic user	A1
Beginner-Basic user	A2
Intermediate- Independent user	B1
Intermediate-Independent user	B2
Advanced- Proficient user	C1
Advanced – Proficient user	C2

Linda López – Author

1.2.3. DESCRIPTIONS OF EDUCATIONAL STAGES.

1.2.3.1. WRITING FOR BEGINNERS (A1-A2)

Focused on CEFR (Cambridge University 2011) in writing skill, students should write a short, simple postcard, for example sending holiday greetings. Also, students should fill in forms with personal details, for example entering my name, nationality, and address on a hotel registration form, simple notes relating to matter in areas of immediate need, additionally a very basic personal letter, for example thanking someone for something.

1.2.3.2. WRITING FOR INTERMEDIATE LEVELS (B1-B2)

Based on the writing skills created by CEFR, Students who have developed this skill can produce documents in details about an ample range of topics such as family, personal interests, and students can give explanations about plans, experiences, etc., supported with reasons, and also, viewpoints including advantages and disadvantages of an issue and personal letters. The ranking of Ecuadorian (Butler, 2015) universities is based on B2 level for students which want to get a diploma in undergraduate level according to LOES. (Asamblea Nacional del Ecuador, 2010)

1.2.3.3. WRITING FOR ADVANCE LEVELS (C1 / C2)

In this advanced level (C1 and C2) students according to the table established by Common European Framework shown below, can express without hesitations in complex situations and they can use EFFECTIVELY language (spoken and written) for social, ACADEMIC and professional objectives. It is the maximum level by which a person can be categorized with specific indicators established for native people. And even this level can indicate the level of knowledge in scopes of Science.

Table 1. *Common Reference Levels: global scale*

Proficient User	C2	Can understand with ease virtually everything heard or read. Can summarise information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Can express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in more complex situations.
	C1	Can understand a wide range of demanding, longer texts, and recognise implicit meaning. Can express him/herself fluently and spontaneously without much obvious searching for expressions. Can use language flexibly and effectively for social, academic and professional purposes. Can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors and cohesive devices.
Independent User	B2	Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.
	B1	Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans.

Retrieved from : https://www.coe.int/t/dg4/linguistic/Source/Framework_EN.pdf

1.2. ACADEMIC WRITING

1.2.1. ACADEMIC WRITING AND CONVENTIONAL WRITING

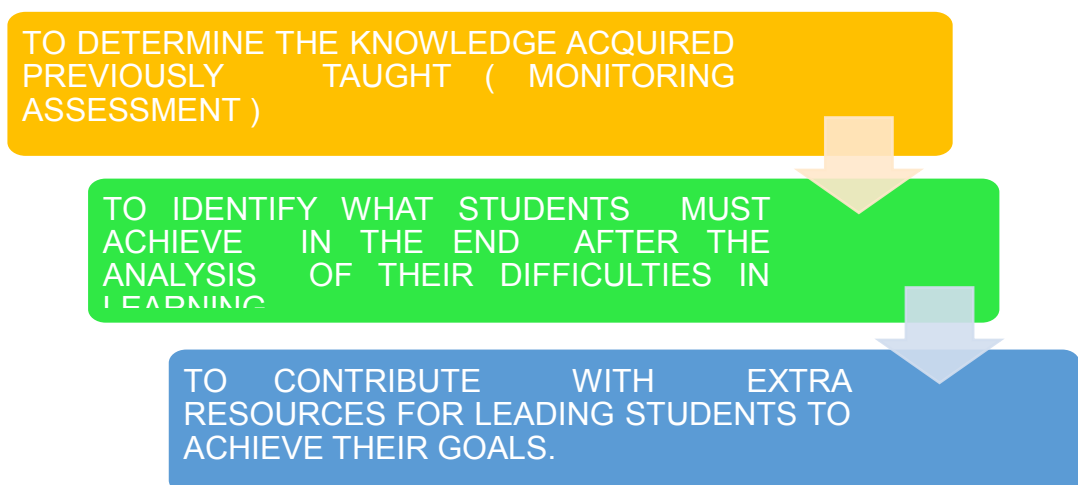
Academic writing has evolved according to the parameters established for publishing manuscripts which are mostly accepted written in English in the most scientific journals. For that reason, the scientific guidelines are rigorous based on the improvement of the written manuscripts for the submission process which could be of the most frustrating scopes due to the strict indicators by which manuscripts are evaluated with scientific rigor. (Harmon, J., Gross, A. 2007).

1.2.2. ACADEMIC WRITING AND ASSESSMENT AT HIGHER EDUCATION.

In the Assessment handbook published by Ulster University (2016) it was considered that in higher education the type of knowledge and abilities developed by undergraduate students should be assessed in different kind of assessments. This crucial process has been analyzed for designing according to the learning outcomes approach in which assessment must be planned within curriculum. Tomlinson, C., Moon, T., Imbeau, M. (2015) indicates that for supporting student success there are 3 types of assessment such as: pre- assessment, formative assessment and summative assessment.

Pre-assessment can be implemented at the beginning of a stage or unit for showing the instructor or teacher the previous information about specific knowledge. Pre-assessment do not compile grades. Formative assessment is applied throughout the period of an educational program which provide help for planning next steps after supporting students with a feedback. This assessment shows students their progress and allows to the teacher organize activities for the reinforcement.

According to Andrade, G. J. Cizek, G. (2010), The best formative assessment identifies plans for the improvement of learning issues in the future. If teachers apply an assessment for checking merely scores, that is not considered a formative evaluation. Based on this aspect, formative assessment implies specific sections for determining, identifying, and contributing resources for supporting Scaffolding methodology as we can see in the graphic below:



Formative assessment does not imply a process controlled exclusively by teachers owing to the fact students have to know the progress by which they are learning. It is an organized activity for preparing students to be able to achieve skills and actively be part of the society. The main objective is to seek answers for next questions such as: Where am I going, how am I going, where do I continue?

(Andrade, H. G. 2010) During this process, students' role have changed focused on parameters that consist self-assessment, self-regulated academic learning.

Self-assessment entails the student's analysis about his/her work based on quality and scrutiny about the degree related to criteria established for making improvement according to Andrade, H. G. 2010

For Andrade, H. G. (2010) In this process, students definitely need the support of feedback as one of the most outstanding processes by which they can achieve empowerment in their new skills. Self-assessment and self-regulation can offer a new alternative to achieve awareness about quality focused on their own tasks in isolation of the teacher's guidelines.

1.2.3. ACADEMIC WRITING AND SELF- ASSESSMENT

Self-assessment in higher education has been included since 1990 which has focused on mainly as cognitive activity based on Bound's, D. (2013) analysis by which learners make decisions about their learning. In this process students and learners are working in a cooperative enterprise where the students are inducted to think in new qualitative ways related to metacognitive practices, and critical reflection. The main objective to apply self-assessment consists basically for improving the quality of learning.

As a process, self-assessment allows to students reflect on their work based on the quality of it. Also, it analyzes other parameters such as degree, criteria, and learning outcomes. Self-assessment provides feedback to improve academic activities like Academic writing. Self-assessment do not show grades or scores that self-evaluation includes in its

activities taking into account concrete criteria according to the subject or academic activity. (Andrade, H. 2010)

Based on Boud, D.'s (2013) book, he entails that self-assessment is an innovation that appropriately could be immersed in any scope and they are designed for a specific subject for undergraduate or professional development making emphasis in students autonomy and collaborative learning assessing their own learning goals. Focus on these parameters, about self- Assessment, rubrics are the educational resource for applying criteria according to specific activities for improving them.

1.2.4. SELF-ASSESSMENT AND INSTRUCTIONAL RUBRICS

In this context, as Andrade, H. G. (2000) has indicated, rubrics support the process by which student work is assessed progressively. Specifically, instructional rubrics are the most efficient tools due to they make difference among levels of quality which include sections from excellent to poor. Instructional rubrics are applied in complex assignments like research papers, essays, and also, long-term projects. One of the purposes Instructional rubrics shows information to students about their progress and the weaknesses they need to improve.

In this context, Absolum, M. (2011) mentioned in his book that using instructional rubric allows students monitor their learning an even promotes self-feedback based on his / her activities. Boud, D. (2013) affirms self-assessment engages progress in students learning in a critical develop of skills associated to monitor and achievement of them. In this scope, peer assessment and peer feedback show a meaningful role which enhance self-assessment in which dual responsibility, validating reflective analysis of the learning outcomes, and even critical thinking about specific criteria.

1.2.5. ACADEMIC WRITING & RESEARCH

1.3. RESEARCH

Research is one of the main aspects by which Ecuadorian Organic Law in Higher level has been included in Chapter 2, article 8. (LOES, 2011) Ecuadorian universities have to support

the scientific development in different disciplines and additionally the scientific production which means that is required more programs for improving these areas. Scientific production is known as the production of Scientific knowledge which is the process for increasing written and spoken activities focus on research and innovations. RIACES (2011) as an international organization which control indicators focused on research done by universities communities in South America, affirms it is indispensable a deep commitment for fostering communities of research within universities. The item or goal 25 promoted by OEI (Organización de Estados Iberoamericanos) for being developed as one of the educational objectives in higher education toward 2021 is to reinforce the research in scopes such as technology, science and innovative projects in the region. There is a necessity for supporting a research culture in organizations (Birley, G., Moreland, N. 2013) including some activities such as:

- Awareness about relevance of research and its recognized function in scopes like quality.
- Research conferences / seminars regularly
- A research department or center for supporting, helping and fostering this activity.
- An organized staff or committee, experts in research for helping other academicians.

1.3.1. RESEARCH: RELEVANCE

The technological development has allowed sharing academic information among organizations, collaborative communities, groups of researchers like www.researchgate.net, and academicians around the world. In Menter, I., Murray, J. (2016)'s words, in a country the main scientific core should be focused on the connection among research, policy and practice. As these authors wrote, the relevance focuses on research consists in the value of supporting innovation, creativity and problem-definition and developing intelligent research communities.

Knowledge-based societies have their core and development mainly at universities and for that reason educational research leagues tables consider relevant aspects such as high-quality, research-active and expert staff for assuring success in the ranking and even for competing and get high indicators globally (Menter, I., Murray, J. 2016)

1.3.2. RESEARCH AND EFL / ESL STUDENTS

As Bain, D. (2015) refers, students L2 writers in their learning and progress could be assessed with specific items established using formative assessment for showing validity and reliability in this process of development. In addition, this author faced in his work, the change which is needed for developing EFL/ESL writers from writer-centered learning to reader-centered communication. According to Giltrow, J., Gooding, R., Burgoyne, D. (2014), the acquisition of knowledge focuses on research comes from techniques of inquiry involved in several academic scopes. So, in order to help university students, it is crucial to organize groups which can be able to participate actively in research practices like writing abstracts or preliminary publications in research communities created specifically for improving this scope and the quality of research at University level. Willinson, W. (2012) argues that undergraduate students need a sustainable support for enhancing academic skills in order to produce high quality in research.

1.3.3. RESEARCH AND ETHICS

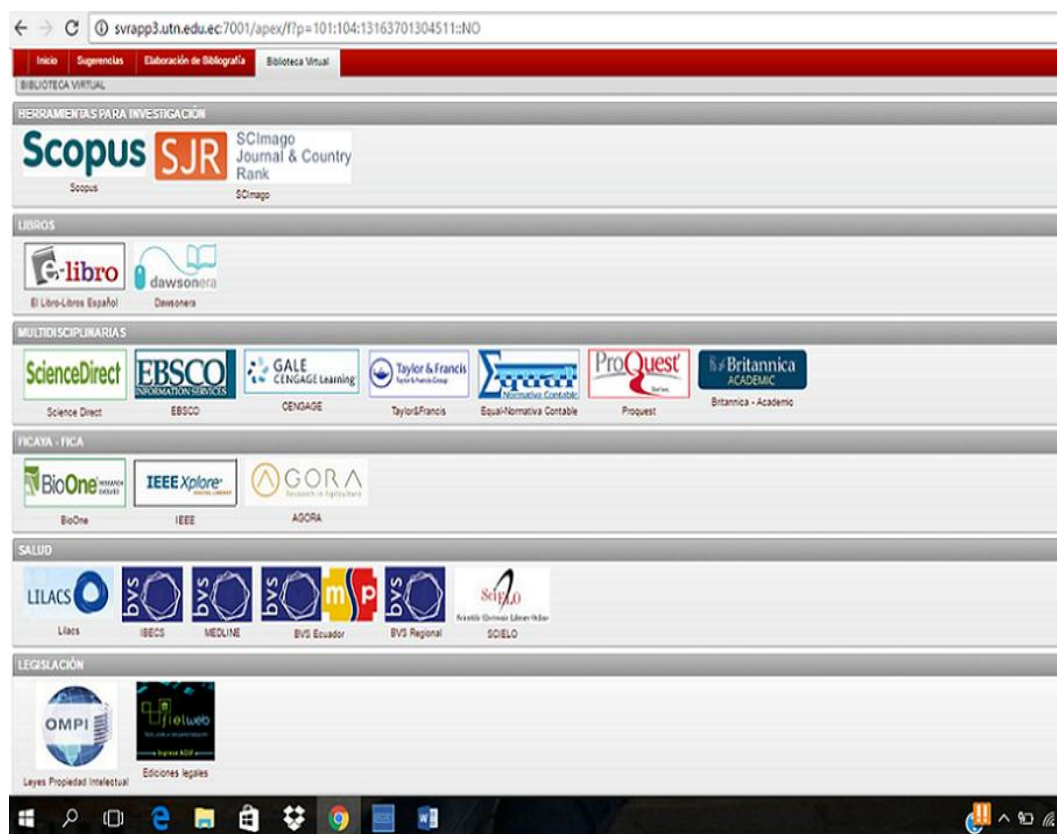
One of the main aspects to be considered within this scope entails to avoid textual plagiarism for supporting the knowledge presented in scholarly writing.

As Bain, D.,(2015) says in his book "Developing International EFL/ESL scholarly writers ", the learning process must be attached to a formative assessment by which students can see their progress permanently ethically.

1.3.4. RESEARCH AND PUBLISHING

According to Lillis, T., Curris, M.J. (2010) Institute for Scientific Information(ISI) and its staff is in charge of checking around 2.000 new journals about research in dissimilar scopes and only 12% of the submissions are accepted. A low amount taking into account the total of the submissions per year. One of the strong indicators which ISI considers for accepting and publishing journals is the usage of English as a language for conveying scientific information. There are numerous data bases in which it is feasible to publish research articles selected by their quality, innovation, relevance in the Scientific world.

Most of the recognized Data bases used worldwide are SCOPUS, SCIELO, E-LIBRARY, LATINDEX, Taylor & Francis, SJR, E-Libro, SCImago, Science Direct, etc. Moreover, Universidad Técnica del Norte through its Library has availability for checking the most of the data bases thanks to agreements. As evidence in the next section you can see a picture in which it is noticeable the Data Bases included at UTN (Universidad Técnica del Norte) website.



Fuente: Retrieved from

<http://svrapp3.utn.edu.ec:7001/apex/f?p=101:104:51600504291::NO>

During this process is indispensable to recognize some steps or methods used for vetting a research. These steps are included below:

- Two unknown referees (double blind)
- One unknown referee (single blind)
- Blind referees selected by editorial board
- An editor.

1.4. PRELIMINARY PUBLICATIONS

This term was presented by Reyes H., Andrensen M., Palma J. (2011) in their research about Abstracts and its relevance. According to these authors, Abstracts which are considered preliminary publications have some main characteristics. They have not been analyzed with a strict rigor like abstracts which have been presented for being indexed by databases or scientific journals and analyzed by some referees. This process is known as double blind or single blind. In summary, preliminary publications are Abstracts which have not been sent to databases or journals for being analyzed strictly and being published. Abstracts are considered as the international language of publications related to research according to PhD., Bondi, M., y PhD. Lóres-Sáenz, R., (2014) and also they indicate an abstract as a primary document on a research.

Kolty (2010), pointed out about abstracts that they have specific characteristics for finding relevant information in databases or libraries. Kolty (2010) describes them as complex, powerful and sophisticated resources. This author indicates that abstracts are the final section to be written when students have done the body of a paper.

1.4.1. ACADEMIC DISCIPLINES AND PRELIMINARY PUBLICATIONS

Academic disciplines are the core for analyzing abstracts. Abstracts or preliminary publications are classified in several groups of disciplines according to the research applied. For this reason, according to this research, it is not appropriated to generalize a format for writing preliminary publications in the biggest groups of disciplines such as:

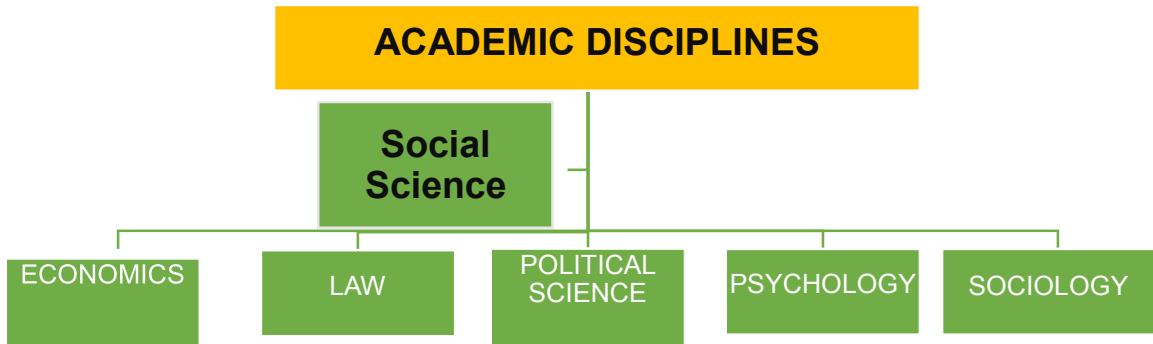
1.	Humanities
2.	Social Sciences
3.	Sciences
4.	Applied Sciences

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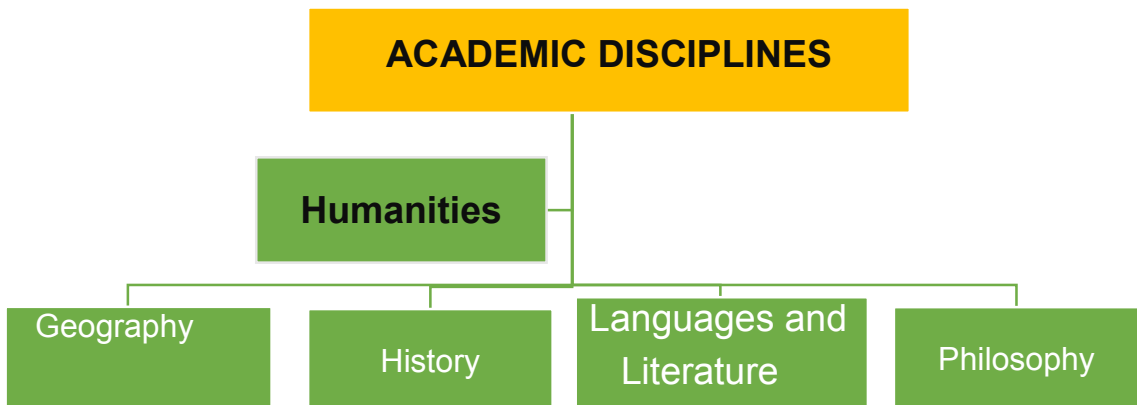
For writing preliminary publications, undergraduate students should recognize what kind of discipline with their structures should be involved in their research due to the structure given using Scaffolding process.

1.4.2. ACADEMIC DISCIPLINES: STRUCTURE AND CLASSIFICATION

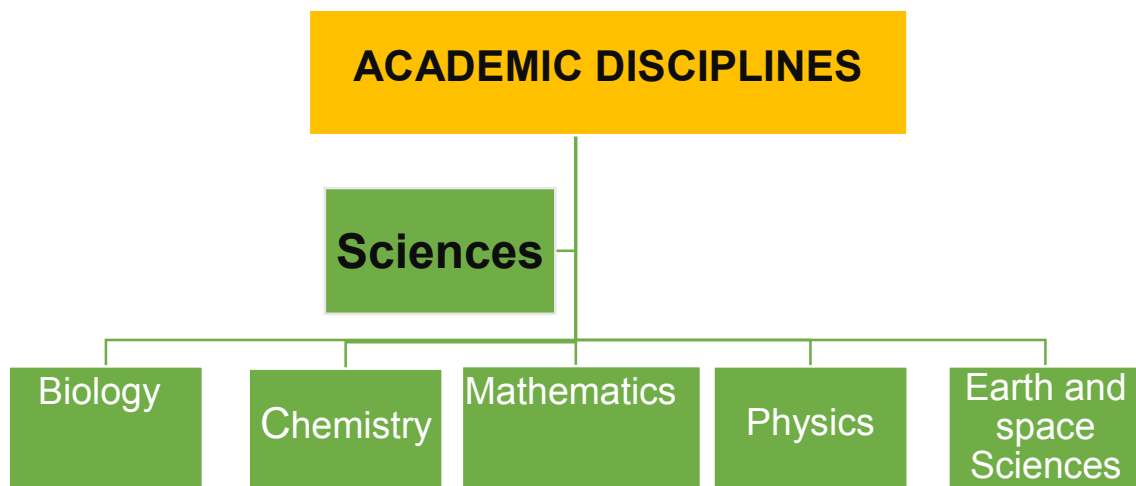
The structure by which students have to write their preliminary publications relies on the research disciplines such as Humanities, Social sciences, Sciences, and Applied Sciences which are representing the majors in the Faculties at UTN: FICA-FECYT-FICAYA and FACA.E.



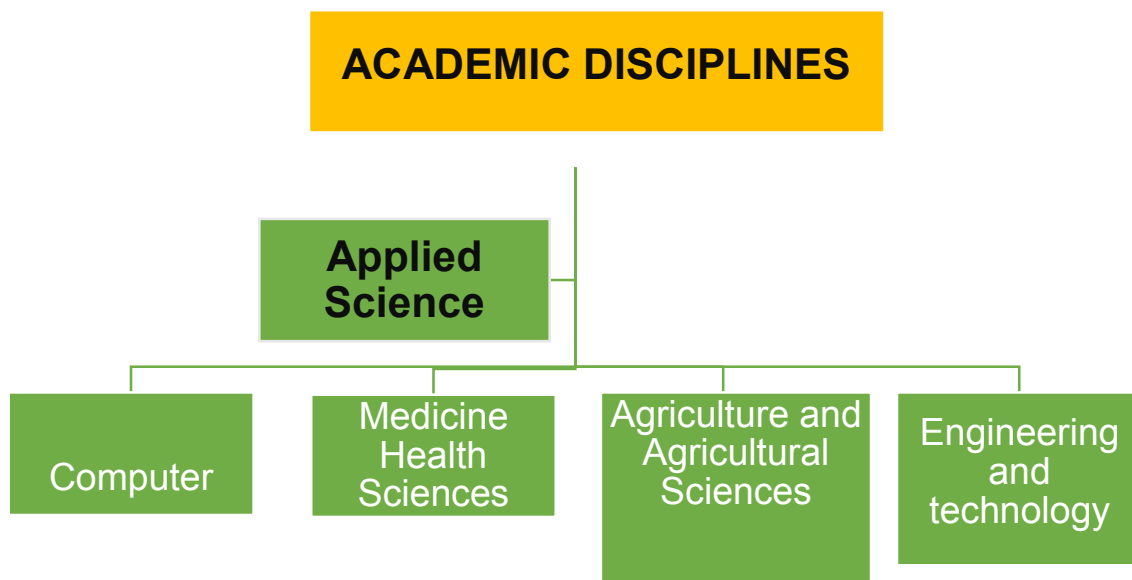
Author: Linda López Intriago



Author: Linda López Intriago

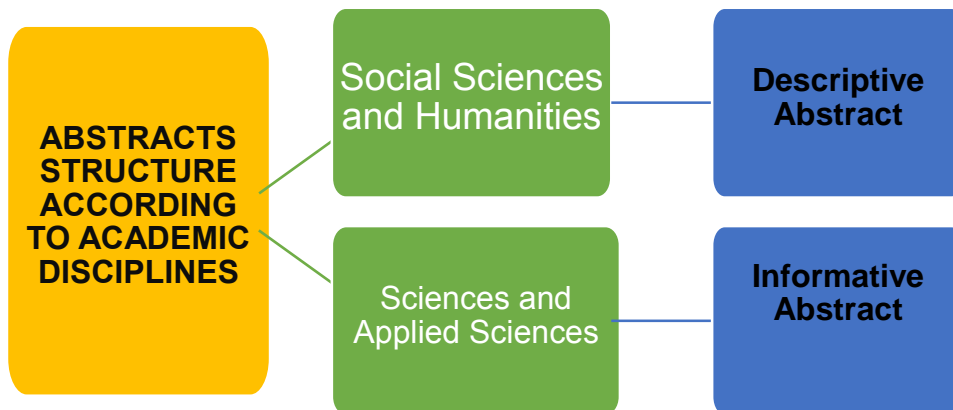


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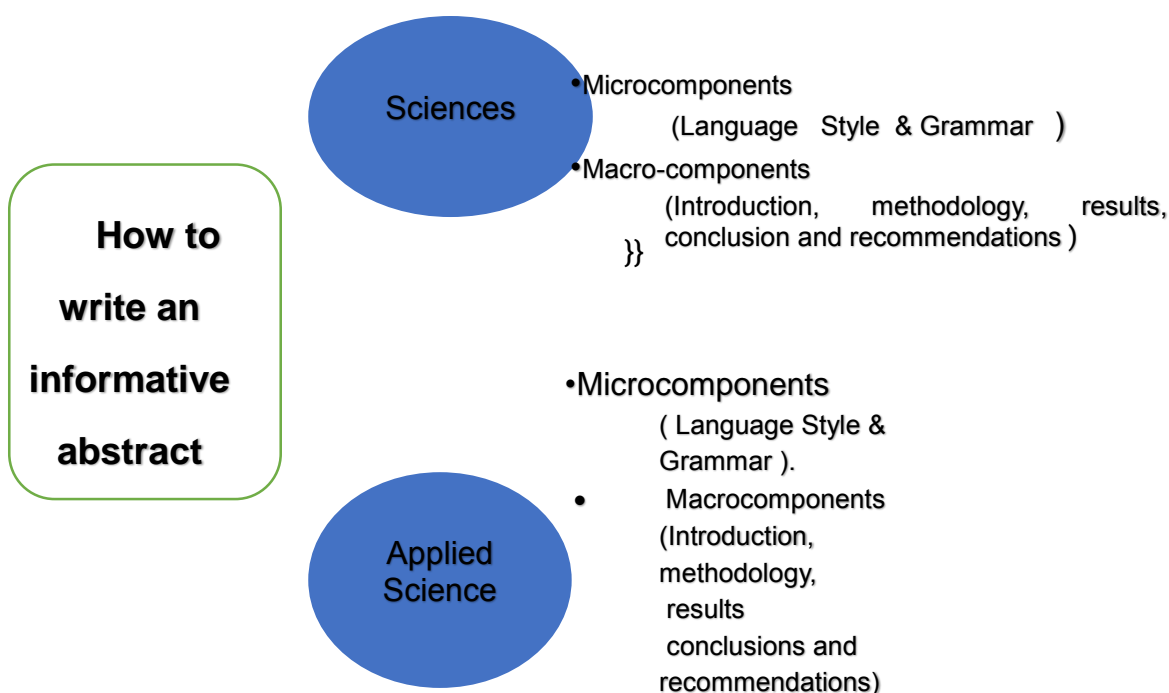
Author: Linda López Intriago

Preliminary publications have their own structure according to their disciplines so that if undergraduate students are studying their majors associated to Applied Sciences so the structure has to be focused on informative abstract. Instead of using an informative abstract in Social Science, it is required to write a descriptive abstract in which the structure does not have the complexity given by an informative abstract.



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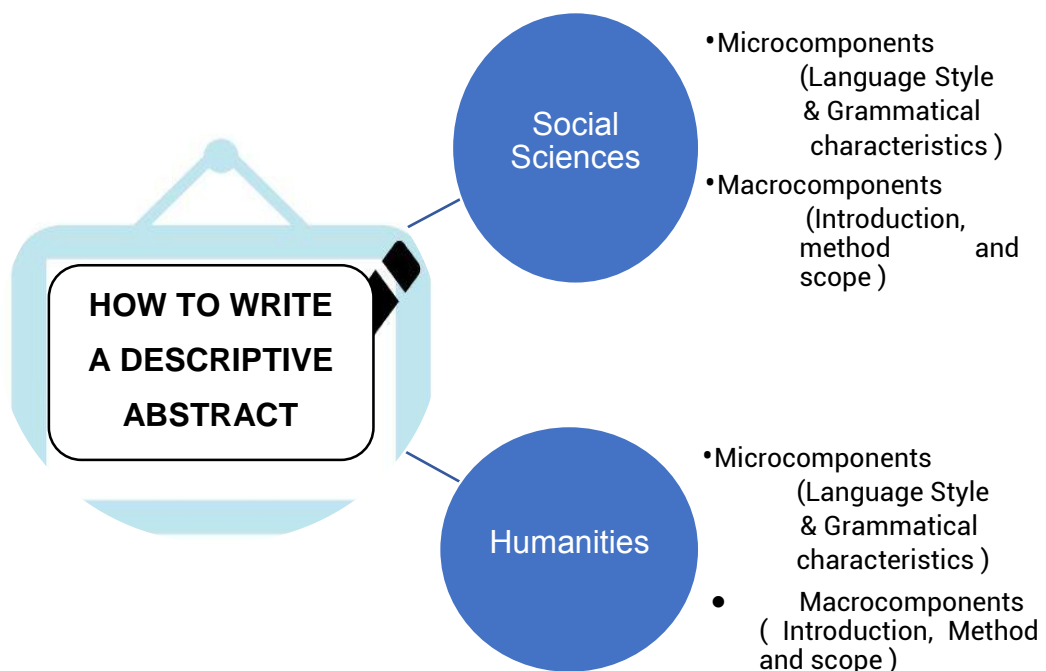
1.4.3. INFORMATIVE ABSTRACT



Author: Linda López Intriago

According to the graphic above, Informative abstracts must be used when a research in Applied sciences and Sciences is going to be done. It requires to be analyzed specific structure such as language by which the research is going to be published. Most of them are published in English, the academic language through all over the world. However, the most crucial aspect relies to write abstracts in the native language of the writer as the first step. Other parameter for being included is the Style or based on grammatical features such as passive voice instead of using active voice, avoid using phrasal verbs, redundancy of words, absence of first personal pronoun is indispensable for writing an abstract. Additionally, it is noticeable to indicate that other aspect to be added is focus on Macro-components by which an Informative Abstract must be published which make a difference with Descriptive Abstracts such as : Introduction, Methodology, Results and conclusions. It is not feasible to include graphics or abbreviations in this crucial Academic document.

1.4.4. DESCRIPTIVE ABSTRACT.



Author: Linda López Intriago

The difference by which a descriptive abstract must be recognized is based on the academic disciplines like Social Sciences and Humanities. A research done in one of these scopes primarily should not consider macro components such as methods, results, conclusions and recommendations seen in an informative abstract whereas descriptive abstracts add as parameters introduction, methods and scope. The language style depends on the online database, journal or Research Center is going to be published the investigation. But it is commonly accepted that most of abstracts must be written in passive voice instead of writing in active voice. Also, first personal pronoun must not be included nor graphics, references or abbreviations except they were shown previously in complete form to give a clear information to the reader about the abbreviation means.

1.4.5. VALIDITY, RELIABILITY AND REPLICABILITY.

The validity of the results have to be selected based on resources used in other research by other scientists for giving more support during the research such as rubrics in different stages for detecting the improvement for writing Preliminary publications, as Andrade, H. G. (2000) indicates. As Andrade, H. G. (2000) refers, Rubrics are created for supporting and evaluating student's learning so focus on specific characteristics such as criteria and gradations of quality for checking the progress by which the student is improving or even for detecting weaknesses which should be analyzed for achieving a future improvement. Quality is other aspect which appears as a resource for supporting the academic writing.

According to Menter, I., Murray, J. (2016) Governments have organized plans for building effective research and improving research quality. Additionally, in order to present a better research, it is required appropriated requests for additional studies. In addition, as Andrade, J. (2005) adds in his book, the validity of a research consists by showing feasible solutions like it is presented through this research about academic writing.

1.4.6. TRANSDISCIPLINARITY & ACADEMIC WRITING

In the 70's the term transdisciplinarity was presented by Piaget (Cheng-Wen, H., & Archer, A. 2017) who defined it as a superior stage in several scopes. Due to the transformation of knowledge has been unavoidable to consider a deep transformation on academic writing. As Cheng-Wen, H., & Archer, A. writes, Transdisciplinary attaches to an ample

range genres of writing, analysis and entailment. Based on Giltrow, J., Gooding, R., Burgoyne, D. (2014), academic writing is an activity which includes specific characteristics for being concise, well organized, logical and concise.

1.5. SCAFFOLDING APPROACH.

1.5.1. SCAFFOLDING ONSET

By the 1970`s, the concept of Scaffolding appeared with Jerome Bruner, according to Brown, T. (2015) although some professionals experts have given more validity to Vygotsky as the main autor of Scaffolding in a learning process. Scaffolding relies in a metaphor by which an elevated provisional platform is used for supporting an activity in high areas.

Olson, D. (2014) describes to Jerome Bruner as the most innovative psychologist of the cognitive revolution. J. Bruner was the scientist who studied more about the stages of intellectual development, so based on cognitive theory advanced he demonstrated that human cognition develops in three stages: Enactive, iconic and symbolic.

This methodology includes also stages such as: opening or initial stage, teaching stage and closing, the final stage by which the tutor training must lead specific tasks for guiding the students to get a deeper knowledge and proficiency in academic scopes. (Mackiewicz J., Kramer I. 2014)

1.5.2. RELEVANCE

Scaffolding implies to get support in a professional way when it is not feasible to acquire a learning objective individually by which it is required to be guided by a teacher. Scaffolding is crucial for being applied in the development of higher level cognitive strategies (Rosenshine,B.& Meister, C.;2012). According to the process, Scaffolding has 3 processes involved: Motivational, Cognitive and instructional. During this process known as tutoring process the application is done in micro and macro levels for supporting students efficiently (Mackiewicz J., Kramer I. 2014)

1.5.3. SCAFFOLDING AND LEARNING

Scaffolding as a process must be applied provisionally until objectives or weaknesses change into strengths within learning process (Rosenshine,B.& Meister, C.;2012) As Gibbons, P. (2015) expressed in her book, through Scaffolding good teachers lead a process by which students are helped to gain confidence.

1.5.4. PROCESS FOR APPLYING SCAFFOLDING

This process will include tutoring sessions, organized at the UTN library (Universidad Técnica del Norte) in different stages by which students who conform groups or communities called knowledgeable peers due to their average in knowledge focus on writing in basic topics required for redacting an abstract like paragraphs, grammatical aspects required in it, etc., and the same interest by which they are going to improve their ability in Academic writing.

1.5.5. SCAFFOLDING : PROTOCOL

RAE (Real Academia Española) defines protocol as a sequence in detail in which a process is carried out in order to follow an organized procedure.

According to Andrade, J. (2005) Protocol is an organized and systematic structure by which the researcher is able to follow during the development of a project in a research. For this reason, Scaffolding is associated with a protocol by which students and teachers are able to follow an organized process during the project. Protocols are used in several scopes such as:

- Protocol of management about intense complications in diabetes.
- Protocol of studying post-authorization about prospectives monitoring.
- Protocol of management about obstructive chronic lung disease.
- Social and business protocol.

Some graphics below can be analyzed in order to verify examples of Protocols used in specific scopes. The first graphic was structured in order to reduce students risks in the laboratory and as it is seen in the image it is a Protocol assessment.

The second protocol seen below includes crucial information such as materials, equipment for being used and the specific procedure step by step carefully which is going to be applied during the process for developing a particular activity in this case associated

UNIVERSIDAD DE SALAMANCA
CAMPUSES DE EXCELENCIA INTERNACIONAL

Reducing student risks in the laboratory Protocol assessment

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TEEM '14
Technological Ecosystems for Enhancing Multiculturality

to laboratory.

PROTOCOL -GRAPHIC 1

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BOX 1 | ORIGINAL LABORATORY-SCALE PROTOCOL

Nanoparticles of BaTiO₃ were prepared by our kinetically controlled vapor diffusion protocol, as described previously^{30,31}. The typical procedure is described below.

MATERIALS

- BaTi(OCH₂CH(CH₃)OCH₃)₂, 0.5 M, in a mixture of methoxypropanol/1-butanol (1-BuOH) with a molar ratio of 2:1 (Gelest, cat. no. DBATT50)
- 1-Butanol (1-BuOH; Fisher Scientific, cat. no. A399-500)
- HCl (12.1 M) (EMD Chemicals, cat. no. HX0603P-5)
- Distilled water (MilliQ water, 18 MΩ-cm)

EQUIPMENT

- Falcon multiwell plate (4 × 3; BD Falcon 12 well, cat. no. 351143)
- Airtight plastic (e.g., Tupperware) box
- Glove bag, hooked to argon supply tank
- Syringes and Kimwipes (3)

PROCEDURE

1. Open the plastic box, place the multiwell plate inside it and place it inside a glove bag.
2. Place the precursor, H₂O/HCl solution, 1-BuOH and three syringes inside the glove bag.
3. Fill and purge the glove bag five times with argon gas.
4. Add solution (1 ml of the precursor + 0.2 ml 1-BuOH) to four wells, and 2 ml of H₂O/HCl to two wells. Whenever doping is necessary, dopant (such as La(acac)₃) precursors are mixed together with the alkoxide precursor and placed in appropriate precursor wells.
5. Seal the plastic box and remove it from the glove bag. Place it in a 16 °C cold room until the gelling is complete.
6. Remove the box from the cold room and place it back into the glove bag. Remove all the H₂O/HCl. Seal the plastic box and place the box inside a warm room to age the product at 30 °C for 1–2 d, after which the syneresis will be complete and well-formed pellets can be collected, rinsed with 1-BuOH and dried under vacuum.
7. A white to pale-yellow powder (431 mg) is obtained.

Using a 20-ml vessel (instead of the multiwell plate) inside a plastic box with a 2.6-liter volume capacity, we obtained a maximum of 1.2 g of the product, with a yield >95% as described in reference 31. Above this volume, this protocol yielded amorphous materials.

PROTOCOL – GRAPHIC 2

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https://www.google.com.ec/search?biw=1080&bih=469&tbm=isch&sa=1&q=protocol+in+laboratory&oq=protocol+in+laboratory&gs_l=psy-ab.3...520160.523829.0.524158.18.14.0.0.0.0.514.1552.2-4j5-1.5.0....0...1.1.64.psy-ab..14.2.785...0i19k1j0i8i30k1.0.3uenl6COlvQ#imgsrc=NqTdFZmocnEBaM:

The protocol for applying during the development of this methodology has been created according to the main aspects implemented in Scaffolding. In order to clarify the concept given by Deane, M., & Guasch, T., (2015) Scaffolding means give appropriate support to

help students for reaching objectives they can not achieve individually was included activities based on the protocol for introducing in this project which were showed below:

1.5.5.1. Brainstorming (compilation of information)

To facilitate the process for improving writing activities, Scaffolding requires previous information for compiling, analyzing and writing properly. During this process, at the beginning students present their point of view or previous ideas about a specific topic given in class in this project related to Scholarly abstracts and their structure. Teachers can immediately recognize and compare their knowledge and the proper features and characteristics of the topic to be analyzed and studied. As evidence, in this period known as Brainstorming, students must present evidence of their first previous activity related to the topic organized by teachers. This initial activity can be reinforced using a special rubric designed according to the parameters to be achieved in the program.

1.5.5.2. Outline or prewriting (general idea or prewriting)

As part of the initial process and in order to compile the main information which must be included in a specific writing activity, it has been taken into account the usage of graphic organizers and webs for brainstorming and for selecting properly main ideas (Price & Harkins, 2011) The ideas are selected related to specific topics given in class. Students are going to analyze knowledge through graphics organizers in a practical form even debating topics associated to scholarly abstracts and their structure micro and macro in order to establish a clear process for writing.

1.5.5.3. Rough Draft / Modelling (initial draft or practices)

In this second phase, after checking different structures of abstracts, students must check and analyze dissimilar abstracts according to the academic disciplines selected at random, by which they are going to identify if the structure has been properly written or not taking into account style of writing, punctuation, coherence, and also the components of macro structure according to the academic disciplines by which was done the student's research.

1.5.5.3. Revising and rubrics (formative assessment)

In the whole process, it is recommendable to adapt and include as part of the process in Scaffolding some resources which can offer validity in a formative period by which students can develop and improve their abilities in writing. So, rubrics are part of the support to students learning in writing. The main objective is to support students by specific criteria for helping them to get the knowledge focus on writing. As part of guidelines for supporting students in Scaffolding are rubrics aligned to formative assessment, as indispensable resources in order to encourage students for achieving goals step by step focus on the criteria given in rubrics which are not numerical. Formative assessment does not require numerical grades due to this program is consider as a final training for helping students to improve writing not for passing the semester.

1.5.5.4. Editing

Students after writing an abstract or preliminary publications are going to edit abstracts written by other group of students. This work requires work in peers for identifying the best structure according to the academic discipline. Time is one of the aspects to be considered due to as Bain, D. (2015) L2 academic writers require of more time than native people for writing Scholarly documents.

Publishing

The final stage is the publication of the abstracts during this process in the library at UTN as evidence of the Scaffolding process applied to the undergraduate students. For publishing, undergraduate students show their preliminary publications which must have been checked carefully with the support of formative rubrics in order to fulfill the parameters given for publications internally (in their faculties) and supported by their authorities.

1.6. SCAFFOLDING IN WRITING

According to Price, E., and Harkins, M.J., (2011), in their research, writing is a complex stage in which it is involved crucial steps such as: planning, monitoring, evaluating and

revising text. Also, as a productive skill, writing activities need to be focus on particular processes for its improvement. Students commonly struggle for writing properly in a second language, specially if they do not know basic structures based on their academic levels.

For Mackiewicz, J. & Kramer, I. (2014) operationalization of Scaffolding involves three stages: Motivational, cognitive and instructive. It presents following strategies seen below:

Motivational Scaffolding:

1. **Recruitment** of specific participants according to their interests or motivation.
2. **Direction maintenance**: In order to lead and keep students on permanent activities involved in active participation during the program.
3. **Frustration control**: Tend to control negative emotions of students related to uncomplete tasks.

Nordlof, J. (2014) strongly affirmed that for supporting the process for fortifying the acquisition of new skills related to research, it was recommendable to organize communities of knowledgeable peers.

1.6.1. SCAFFOLDING AND ASSESSMENT

Scaffolding entails the provisional application of resources or support in order to change weaknesses into strengths within learning process (Rosenshine,B.& Meister, C.;2012) During this process, formative assessment fits perfectly owing to the fact its procedure follows the same objectives from monitoring stage to Instructional tractability which is based on learning progression. Andrade, G. J. Cizek, G. (2010) As this author said, instructional tractabilty allows making decisions for improving learning after analyzing future projects for applying and even studying evident problems during the application of a project focused on academic writing. It is underpinning to point out, assessment requires a feedback for leveraging the whole process and achieve positive learning outcomes due to their application within and beyond immediate learning process. (Evans, C. 2013)

CHAPTER II

DIAGNOSIS

2.1. BACKGROUND

As a previous background related to writing in English focus on Preliminary publications which are the main brief connection with research, It is noticeable to make mention of Academic indicators which evaluate per categories the Educational System in higher level, in a globalized scope have been changing due to international plans and projects for an improvement of the higher education for acquiring an upper category level "A", by which International Organisms like RIACES (Red Iberoamericana de Acreditación de la Calidad de la Educación Superior) have involved in the development of Academic activities based on research, and projections focus on the development of Academic activities, research and projections aligned to the qualification focus on evaluation processes and strengthening, quality assurance and accreditation, entitlement academic programs or institutions of higher education.

The Universidad Técnica del Norte- UTN, considers as a requirement within its curriculum for concluding with the undergraduate level, that university students must investigate and present a research with an abstract in Spanish and English with a summary about the most relevant content of the research which must present strict standard for being consider as a high quality document. These preliminary Publications or abstracts are considered as the international language for research according to PhD., Bondi, M. and PhD. Lorés-Sánchez, R.,(2014).

Also, they indicate that an abstract is a crucial document within a research. Related to these concepts previously showed, it was noticeable that without an academic program focused on Academic writing about preliminary publications of undergraduate students, these documents are considered as a poor and low quality activity according to academic indicators, specifically whether fundamental aspects such as definition, relevance, classification, etc., can not be identified by students based on the research done.

2.2. ISSUES IN ACADEMIC WRITING IN ENGLISH

To begin with crucial issues seen in several classrooms after applying the survey with 12 questions for dissimilar careers, university students enrolled at Centro Académico de Idiomas- CAI at the Universidad Técnica del Norte-UTN, was noticeable that they did not have a clear idea about how to write an abstract and what was the structure by which they must recognize their abstract per academic discipline. Additionally, through the diagnosis survey it was detected they did not know about an academic program for applying in order to improve and increase their skills in academic writing even due to they did not use a module or protocol for writing scientifically. Although, survey showed in question number 1, a huge amount of students expressed that their classes had been focused on academic writing, students could not recognize the structure (macro and micro) seen in different abstracts for writing specific abstracts such as Informative and Descriptive.

Although, their answers in question 2 were most positive according to their knowledge in Spanish for writing abstracts, in question 3, a group of 83% indicated that they did not know how to write preliminary publications or abstracts in English. Additionally, after applying question 5, a meaningful group of 67 % students showed their lack of knowledge for writing abstracts based on the academic discipline by which they concluded their final projects. They did not know if abstracts must be written using an universal format for the whole academic disciplines. And lastly, taking into account that, question 9 and 10 showed that it does not exist an academic program or training in students´ Faculties and at CAI for helping students in this specific scope related to improving academic writing specifically about abstracts.

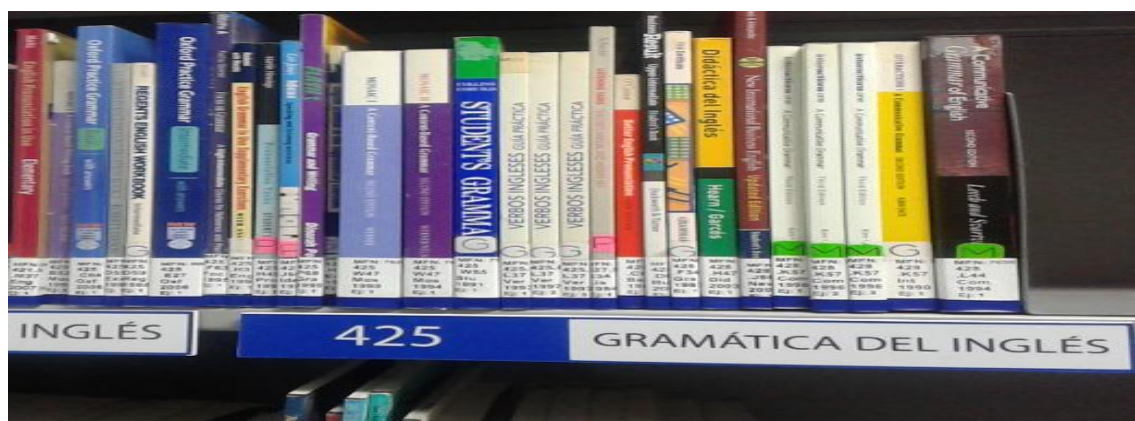
2.3. TRANSDUCTIVE REASONING

After studying some types of reasoning such as Inductive, deductive, and transductive, according to Guerrero, M. (2014) based on transductive reasoning says that an individual is able to compare and find similarities in particular topics which are studied. Also, one of the most issues when academicians want to teach about writing preliminary publications relies on students at CAI do not know how to identify proper structure for redacting according to the disciplines by which preliminary publications should be organized. Transductive reasoning is known as the stage by which learners make generalizations or

stereotypes without deductive analysis and for this reason students organize an activity and generalize them.

2.4. ACADEMIC PROGRAM FOR SUPPORTING ACADEMIC WRITING

Due to, the results seen in our 1st survey, it was evident the lack of basic knowledge focused on Academic writing of Preliminary publications such as macro and micro structure according to particular disciplines. During this academic program students who were involved in final English courses owing to their knowledge in English were selected for participating in this academic program. Even after checking books at UTN Library focused on teaching English, it was noticeable that university students did not have academic resources for supporting them in this academic process for writing preliminary publications when they conclude their thesis or final projects. As you can see in pictures below, there were not books in English for offering assistance to university students for looking more information about structures or components of abstracts.



All of the books seen in this graphic were focused on teaching grammar for students who want to communicate in a second language but not about writing abstracts. Due to lack of books and even programs for supporting university students for improving this productive skill, it was selected Scaffolding as a methodology and it was created an academic program for being applied based on next objectives seen below.

2.5. OBJECTIVES

2.5.1. GENERAL OBJECTIVE

To analyze the implementation of Scaffolding methodology in academic writing for the improvement of preliminary publications focus on research applied to students enrolled in 5th English level at Universidad Técnica del Norte-UTN-Ecuador.

2.5.2. DIAGNOSIS OBJECTIVES

1. To support information related to the application of Scaffolding methodology with references theoretical-scientists written by experts focus on the topic given for the improvement of academic writing in preliminary publications based on research.
2. To compile theoretical evidence through surveys applied to students enrolled in 5th English level for collecting information which allows the application of Scaffolding methodology.
- a) 3.To create a protocol of research (physical and virtual resource) for the support in sequence with monitoring included in Scaffolding methodology through collaborative work in communities or groups of peers applied to students in 5th English level.
- b) To analyze impact and results related to the incidence of Scaffolding methodology through the information acquired during this research about writing preliminary publications in English for validating and publishing the final results in this Project.

2.6. DIAGNOSTIC VARIABLES

- a.- Methodology
 - Scaffolding & protocol
- b.- Academic writing

- Previous knowledge about writing based on research
- Training educational program focused on improving writing
- Quality in Academic writing about preliminary publications.

2.7. DIAGNOSTIC MATRIX

Objectives	Academic Writing based on abstracts or preliminary publications is a sophisticated and complex document that can be used in order to identify relevant scientific information for academic readers in several scientific disciplines. Koltay (2010).
Variables	Academic writing in preliminary publications.
Indicator (1)	According to the academic disciplines before indicated: -Descriptive abstract
Sources	Abstracts or preliminary publications written by students.
Resources	Surveys

Objectives	Academic Writing based on abstracts or preliminary publications is a sophisticated and complex document that can be used in order to identify relevant scientific information for academic readers in several scientific disciplines. Koltay (2010).
Variables	Academic writing in preliminary publications based on sciences and applied sciences.
Indicator (2)	According to the academic disciplines seen before: -Informative Abstract
Sources	Abstracts or preliminary publications written by students
Resources	Surveys

Author: Linda López Intriago

2.8. OPERATIONAL MECHANICS

2.8.1. POPULATION OR UNIVERSE

The universe included in this project were 316 students enrolled in 5th level the final stage for finishing English levels. There were 18 classrooms assigned to 5th level during this semester. After selecting this population or universe, the determination of the sample identified a lower group which was crucial for applying the research about the efficiency in the implementation of Scaffolding as a methodology for improving writing of preliminary publications or abstracts.

2.8.2. DETERMINATION OF SAMPLE

For calculating the sample of an exact simple size, it was used a formula recommended by Posso, M. (2011) and also for verifying the data it was checked the public service of Creative Research Systems survey software by which 264 students were selected with a 95% of confidence level and the confidence interval or margin of error was 2,5%.

2.8.3. PRIMARY INFORMATION

In order to collect first data, the survey was applied to 264 students who represented the sample for getting specific information about the research. They were in different parallels, and they were students from different faculties enrolled in 5th level in dissimilar schedules during the semester from March to August 2017.

2.9. TABULATION AND ANALYSIS

2.9.1. SURVEYS APPLIED TO STUDENTS ENROLLED IN 5TH LEVEL AT CAI

The diagnosis survey used in this Project was focused on the main variables considering that if the students do not have a clear idea about how to write in Spanish, it will affect their ability for writing in English even because of the conceptualization or overgeneralization by which they want to apply the same structure in both languages. The

survey was implemented in their native language in order to get proper information about their knowledge for writing a preliminary publication.

After applying the survey, it was identified the following analysis for supporting the implementation of this academic program reinforced by Scaffolding methodology. The statistical information and analysis about 12 questions was included in graphics below:

ANALYSIS

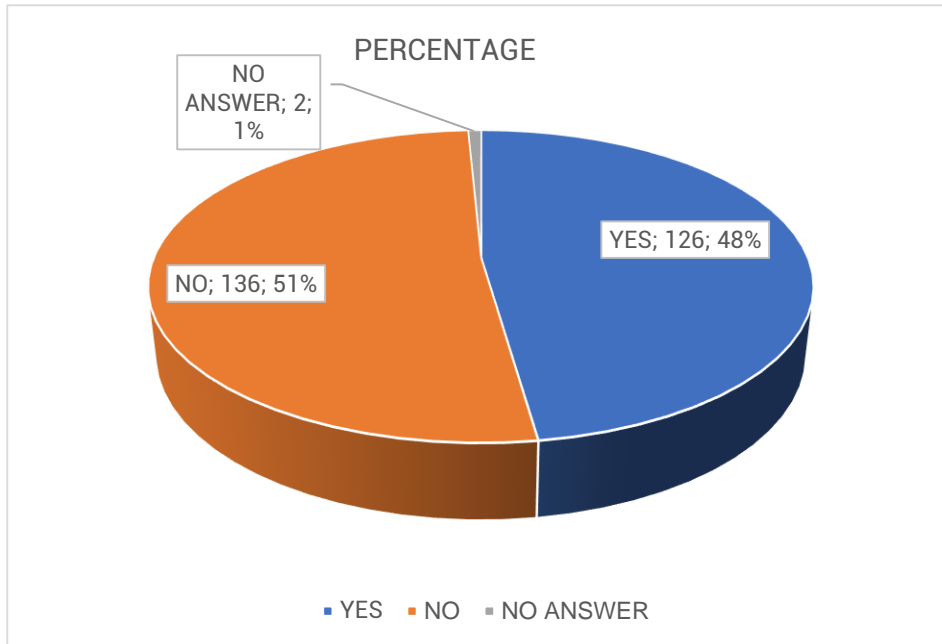
According to the following questions included in the survey above, they were analyzed individually below:

1. Have you attended to classes focused on academic writing related to Abstracts?

Chart 1.1 Frequency and percentage about classes focused on Abstracts

CRITERIA	FREQUENCY	PERCENTAGE
YES	126	48%
NO	136	51%
NO ANSWER	2	1%
TOTAL	264	100%

Graphic 1.2 Frequency and percentage about classes focused on Abstracts.



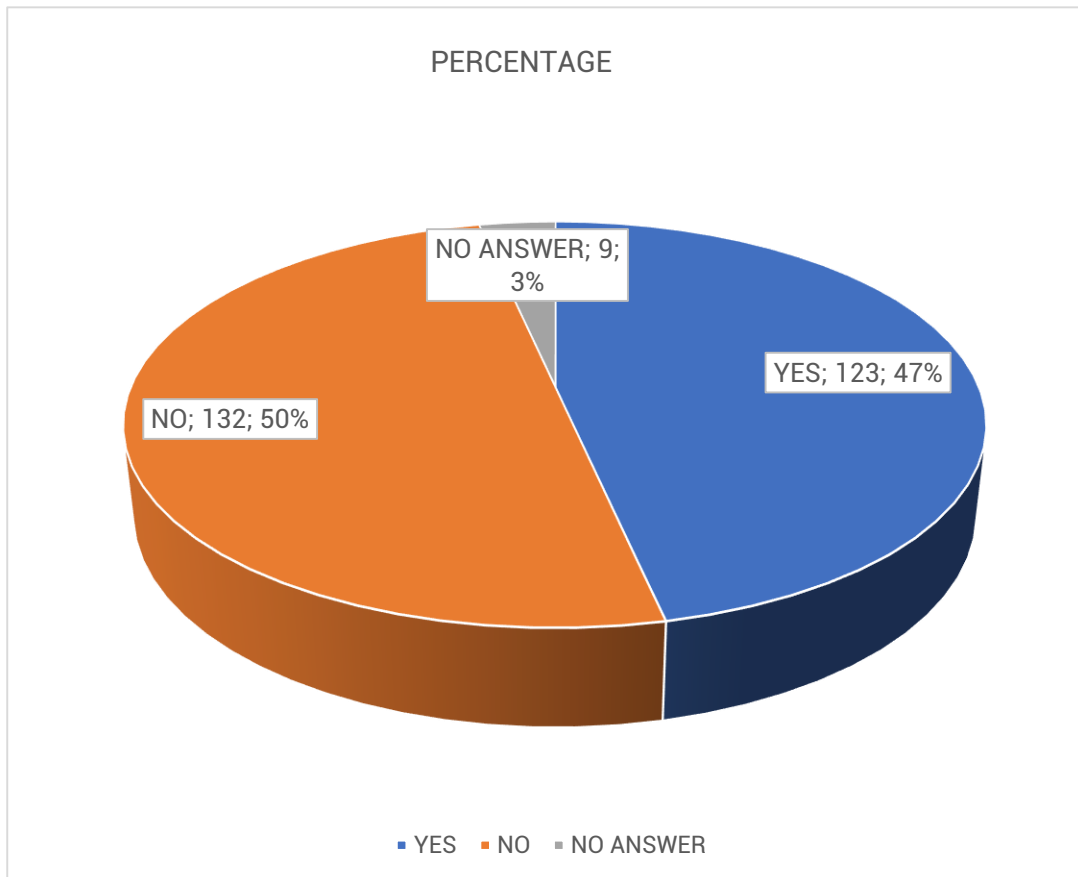
After showing this graphic according to the information obtained per applying the survey, it was detected that 126 (48%) students replied affirmatively in contrast to 136 (52%) students who expressed that they had not had classes focused on academic writing related to Abstracts. As an introductory question, the survey was designed to get real information about a program included in the semester in English class for supporting the need for implementing a program for improving Academic writing focused on Preliminary publications for undergraduate students.

2. Do you know how to organize the academic structure for redacting abstracts in Spanish?

Chart 2.1 Knowledge about structure of Abstracts

CRITERIA	FREQUENCY	PERCENTAGE
YES	123	47%
NO	132	50%
NO ANSWER	9	3%
TOTAL	264	100%

Graphic 2.2 Knowledge about structure of Abstracts



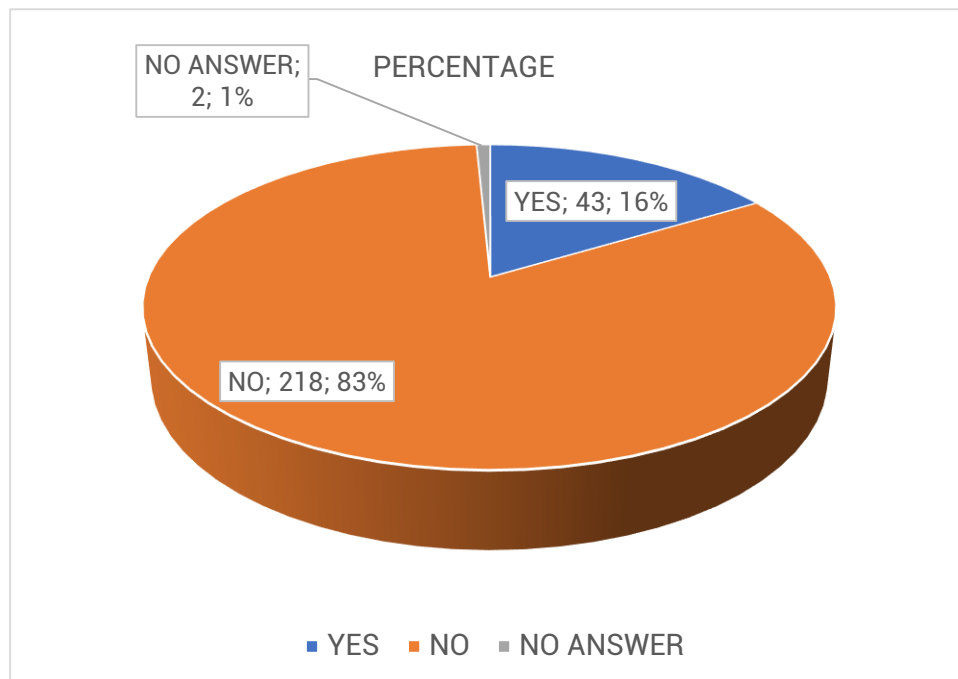
Based on the information collected in this question, 123 (47%) students replied affirmatively and 129 (149%) replied negatively about their knowledge for writing an abstract in Spanish. Apparently, many of them knew how to write an Abstract in their native language. But after starting the academic program supported with Scaffolding many of them did not show their proficiency in this activity at the beginning.

3. Do you know about the academic structure for redacting Abstracts in English?

Chart 3.1 Knowledge about writing Abstracts in English

CRITERIA	FREQUENCY	PERCENTAGE
YES	43	16%
NO	218	83%
NO ANSWER	2	1%
TOTAL	264	100%

Graphic 3.2 Knowledge about structure of Abstracts in English



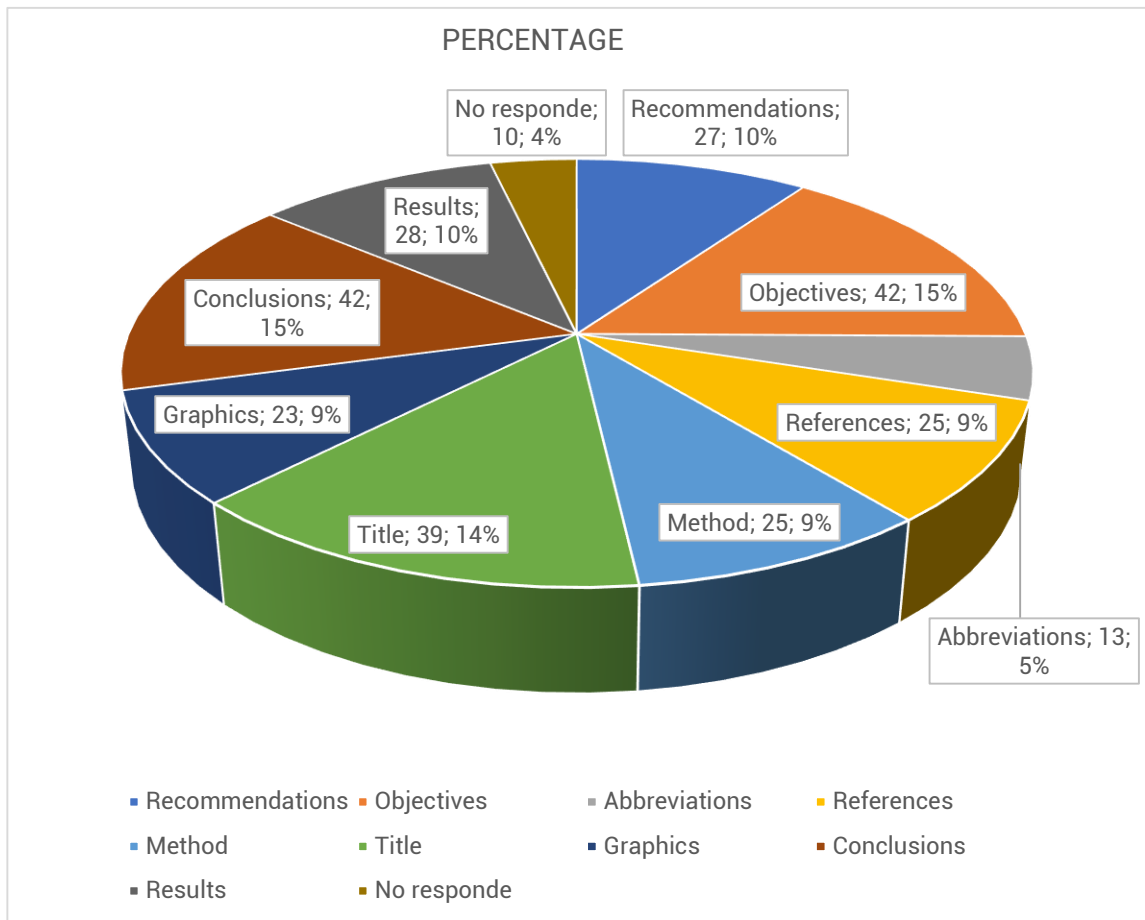
This question was pretty relevant for supporting the academic program promoted and supported by Scaffolding methodology. Most of the students (83%) represented by 218 surveys, indicated that they did not know about the appropriated academic structure for

writing an abstract in English. Due to this lack of knowledge, students could not write properly a preliminary publication as a final document previous to their presentation of their thesis. An academic abstract shows particular characteristics which must be analyzed carefully in a program with an expert due to its complex micro and macro-structure or components that university students do not know based on academic disciplines which make a deep difference for selecting the proper format of abstract.

4. If your previous answer was affirmative, choose the Academic structure for writing Abstracts you know:

Chart 4.1 Knowledge about General Structure of Abstracts

CRITERIA	FREQUENCY	PERCENTAGE
Recommendations	27	10%
Objectives	42	15%
Abbreviations	13	5%
References	25	9%
Method	25	9%
Title	39	14%
Graphics	23	8%
Conclusions	42	15%
Results	28	10%
No answer	10	0,04 %
TOTAL	264	100%



Graphic 4.2 Knowledge about structure of Abstracts

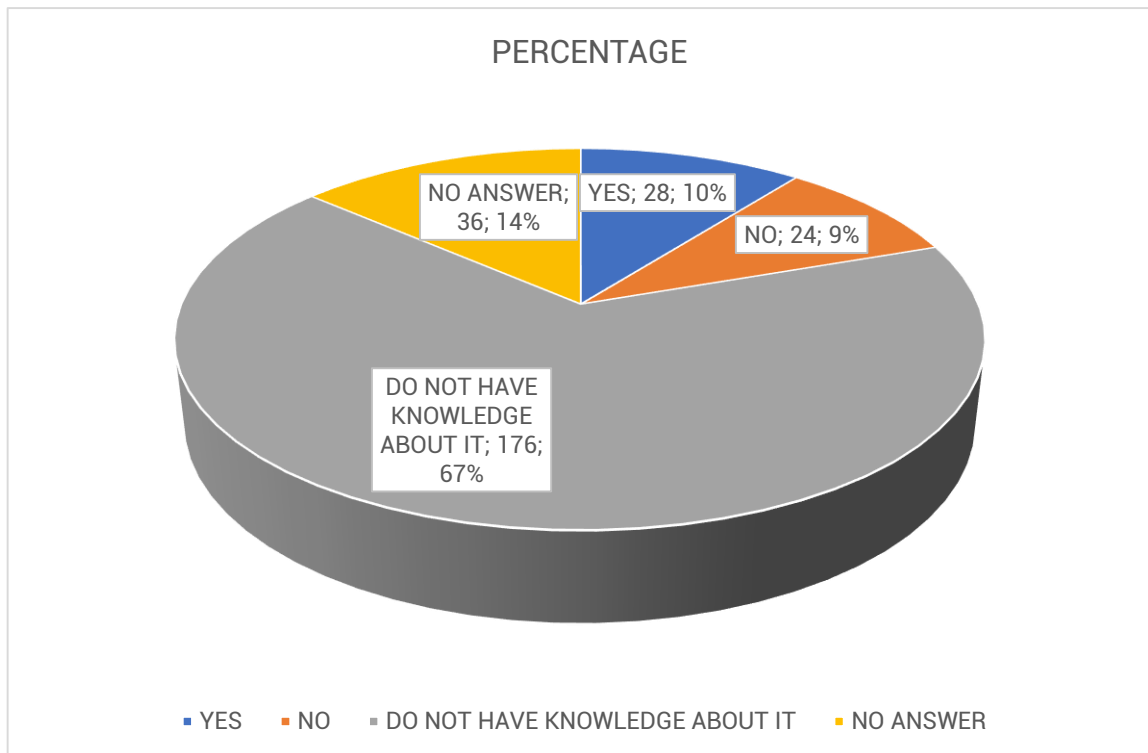
To begin with the analysis, it is necessary to clarify that the main objective of this question was to know the students' knowledge had about general components which must be in an abstract. A group of 42 students (42%) selected objectives and conclusions as the main elements required for writing an abstract. Additionally, a group of 39 students (14%) chose title as a component of the general structure. However, a group of 25 (9%) selected that references must be part of the structure for writing abstracts which is not correct. Other group of university students represented by 9 people (5%) indicated that abbreviations were elements for being written in an abstract but according to the experts, this aspect is not part of the abstract.

5. Indicate if abstracts can be written using an universal or unique format in the whole Academic disciplines.

Chart 5.1 Knowledge about Formats of Abstracts according to academic disciplines

CRITERIA	FREQUENCY	PERCENTAGE
YES	28	11%
NO	24	9%
DO NOT HAVE KNOWLEDGE ABOUT IT	175	67%
NO ANSWER	36	14%
TOTAL	264	100%

Graphic 5.2 Knowledge about Formats of Abstracts according to academic disciplines.



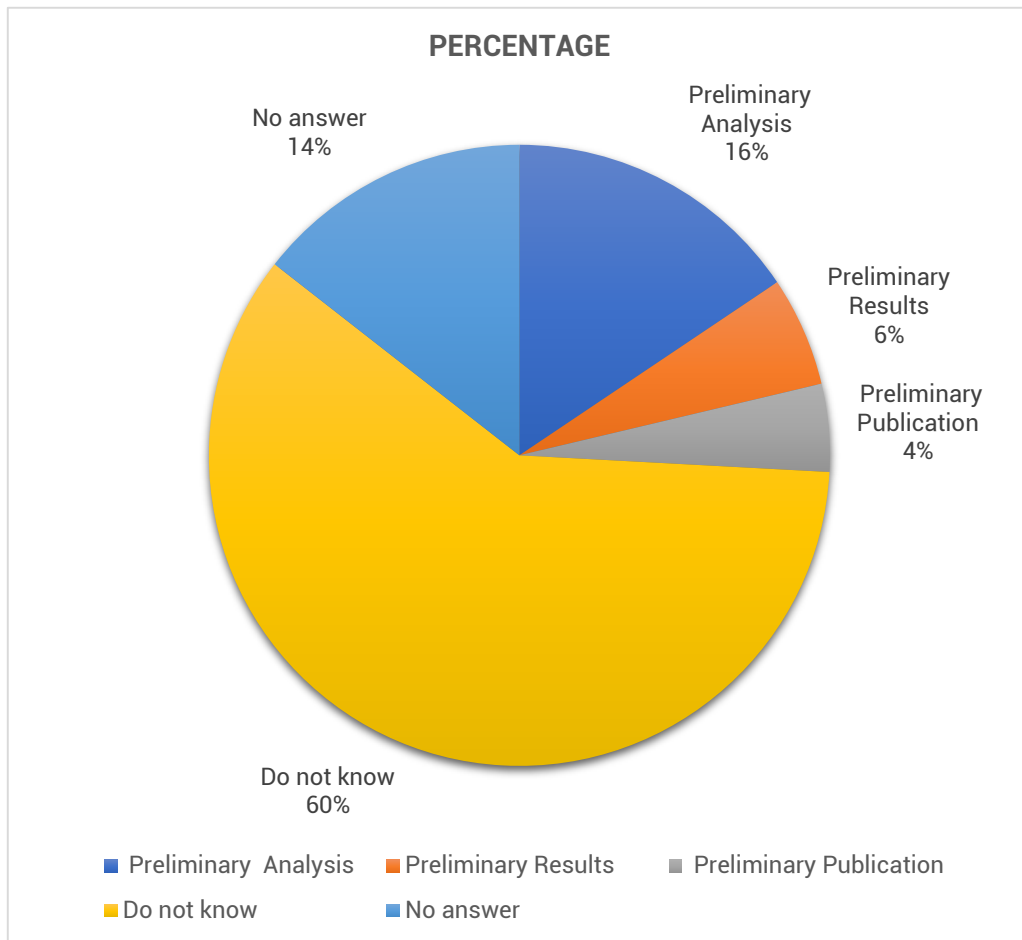
Focused on this question about the structure or format by which students must write an Abstract according to Academic disciplines, most of the students represented by 175 people (67 %) indicate that they do not know about this topic by which at the beginning of this academic document, it is elucidated that writing abstracts imply an ample knowledge about structure such as micro and macro. Also, lack of knowledge about classification of the academic disciplines which is fundamental for the improvement of abstracts affect directly in the presentation of abstracts. When university students do not know about this classification for identifying the correct format, they make a lot of mistakes. As it was presented previously in graphics, abstracts are classified in descriptive and informative and according to the disciplines, descriptive abstract must be for research done in disciplines such as humanities and social sciences while informative abstract is taken into account for disciplines such as applied science and sciences. Affirmatively, 28 students (11%) showed in this survey their apparent knowledge which had to be evaluated practically and regrettably they did not demonstrate properly according to the initial rubric. In contrast, 24 students (9%) answered negatively and 36 students (14%) did not reply.

6. Select the Academic name used by experts researchers in writing by which it is known an Abstract.

Chart 6.1 Knowledge about Abstracts and other name recognized by experts.

CRITERIA	FREQUENCY	PERCENTAGE
Preliminary Analysis	41	16%
Preliminary Results	15	6%
Preliminary Publication	12	4%
Do not know	157	60%
No answer	38	14%
TOTAL	264	100%

Graphic 6.2 Knowledge about Abstracts and other name recognized by experts.



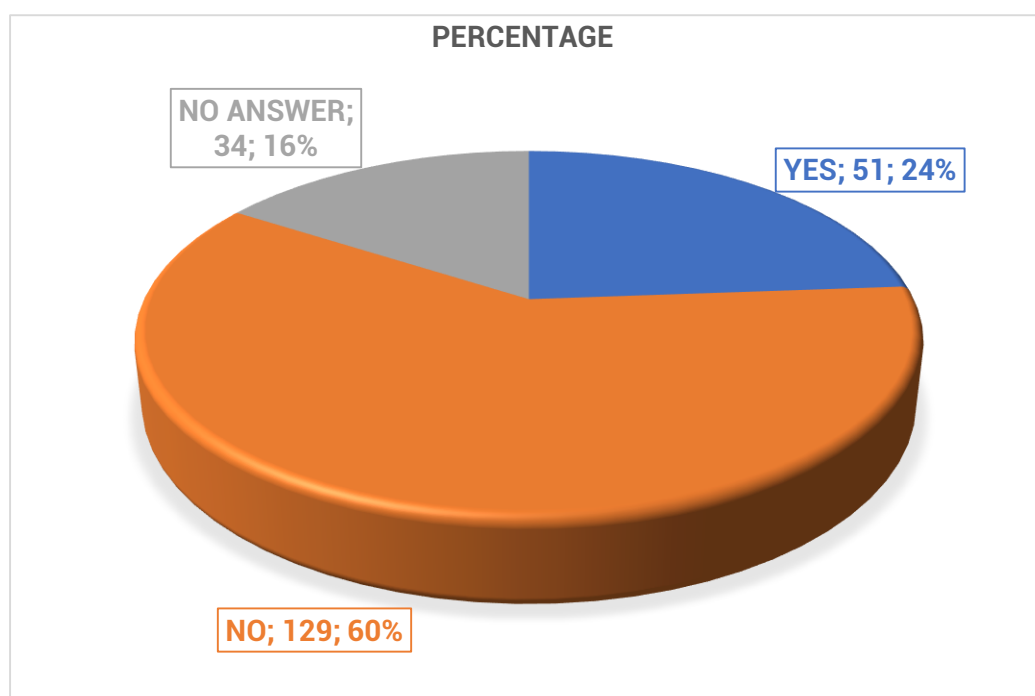
This question was structured taking into account the information given by Reyes H., Andriksen M., Palma J. (2011) who pointed out that abstracts of research which were not evaluated strictly for being indexed in recognized databases were known as Preliminary publications. In order to clarify the usage of this academic name in the information analyzed in this research was included this question. As the graphic showed, based on the survey 157 (60%) students did not know about this topic. And 12 students represented by 5% of population indicated the correct name given by experts to Abstracts. The rest of the students chose incorrect names in the survey.

7. Have you ever written an Abstract in English?

Chart 7.1 Experience in writing Abstracts in English

CRITERIA	FREQUENCY	PERCENTAGE
YES	51	24%
NO	129	60%
NO ANSWER	34	16%
TOTAL	264	100%

Graphic 7.2 Experience in writing Abstracts in English



The structure of this question was based on acquiring information about the experience of students during their academic life for writing abstracts. This question was divided in 3 sections for collecting information about their knowledge in writing in a 2nd language like

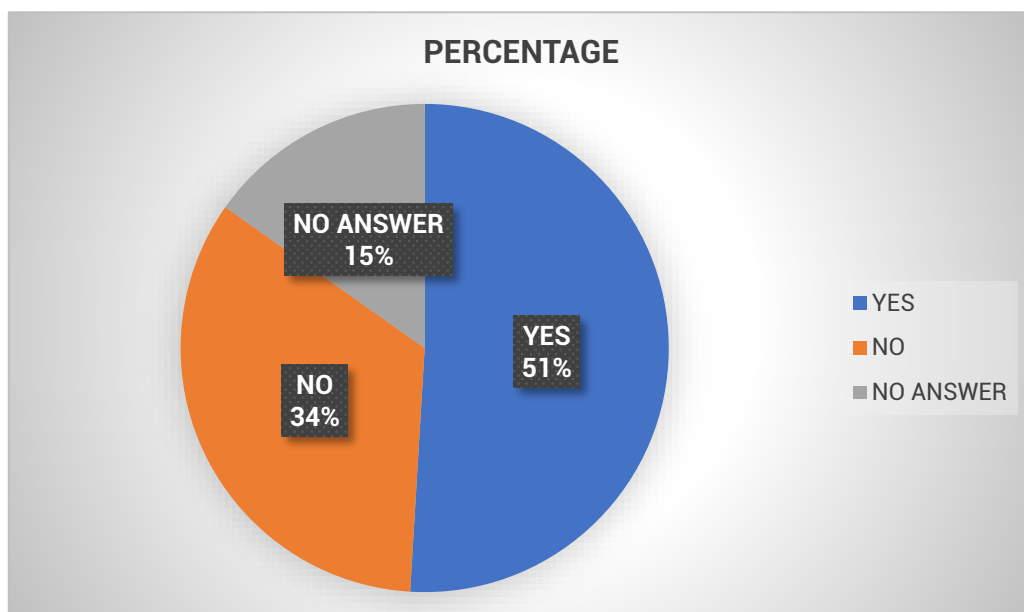
English and their ability for writing an Abstract according to the specific parameters and academic disciplines. Affirmative answer was selected by 51 students who represented 19 % of the total sample, but most of them represented by 129 students (60%) chose NO as a negative answer demonstrating their lack of knowledge and high skill for writing an Abstract in English hence the main objective of the research was validated due to students do not have experience for writing abstracts. Finally, according to the statistic 34 students (13%) did not include a reply for this question.

8. Have you ever written an Abstract in Spanish?

Chart 8.1 Experience about writing Abstracts in Spanish

CRITERIA	FREQUENCY	PERCENTAGE
YES	134	51%
NO	89	34%
NO ANSWER	40	15%
TOTAL	264	100%

Graphic 8.2 Experience about writing Abstracts in Spanish



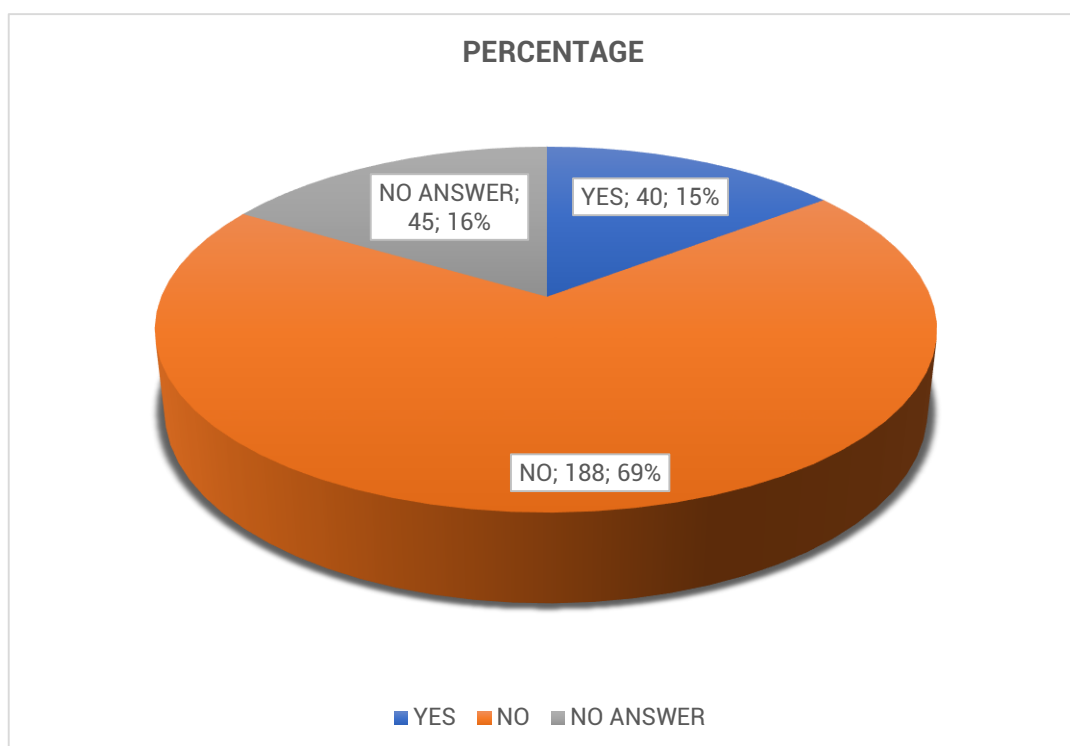
Although most of students (134) selected an affirmative answer for expressing they had had experience in writing abstracts in Spanish, their native language, not all of them knew about macro and micro components/ structure related to the classification of abstracts demonstrated in other questions in this 1st rubric. This question was included in order to identify how well students are able to write in their own language. For validating this question, it was created the program with specific rubrics and protocol. University students were joined for analyzing abstracts in Spanish and recognize mistakes but most of them could not show mistakes in the structure, even for writing a paragraph. Also, students do not know about components in scopes such as micro and macro according to the research done. A negative answer was selected by 89 students who indicated they had not written an Abstract before. And 40 students did not include any option presented in this survey.

9. Does your Faculty have resources or seminars focused on writing abstracts in English?

Chart 9.1 Seminars focused on writing abstracts in English

CRITERIA	FREQUENCY	PERCENTAGE
YES	40	15%
NO	188	69%
NO ANSWER	45	16%
TOTAL	264	100%

Graphic 9.2 Seminars focused on Writing Abstracts in English.



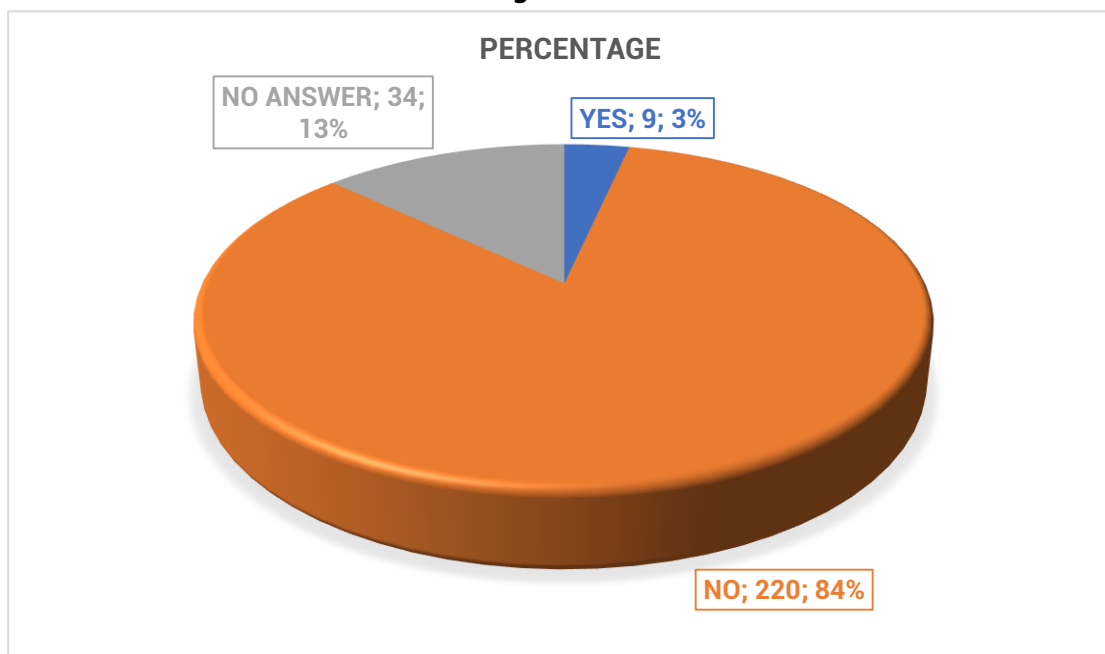
Due to university students enrolled in English classes were from different faculties at UTN, this question looked for verifying if their faculties had offered them academic programs for improving their skills in writing specifically associated to help them in this scope related to abstracts. As a result, most of students represented by 69% showed they had not received assistance like resources or seminars. A few of them (15%) indicated that their faculties had programmed seminars or given resources for writing Abstracts in English. And lastly, 45 students (16%) did not answer to this question. When university students are studying in 8th semester they need to start their thesis or final projects previous to achieve and conclude their higher studies, so the main problem for them consist in abstracts due to the lack of knowledge and assistance given by English teachers or experts academicians who are able to assist them step to step for supporting them in this crucial process which involves complex structures for writing preliminary publications.

10. Do you know any academic program offered to students enrolled in the final English level (5th) at CAI (Centro Académico de Idiomas) at UTN focused on the process for writing abstracts in English ?

Chart 10.1 Program for writing Abstracts in English offered to students enrolled in 5th English level at CAI

CRITERIA	FREQUENCY	PERCENTAGE
YES	9	3%
NO	220	84%
NO ANSWER	34	13%
TOTAL	264	100%

Graphic 10.2 Program offered for students enrolled in 5th level for writing Abstracts in English at CAI



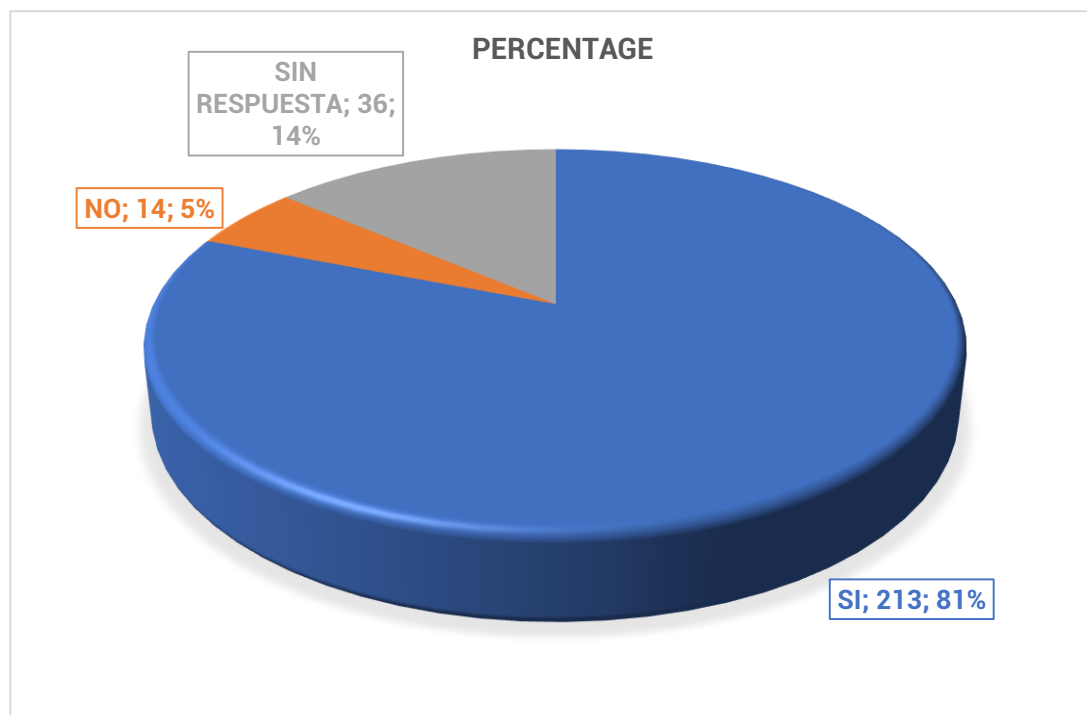
Through this question was evident that more than 50%, exactly 84% represented by 220 students pointed out that they did not know about an Academic program offered at Centro Académico de Idiomas- CAI for writing abstracts in English during their final level of English, 5th level in which most of them are finishing or developing their thesis or final projects at University for getting a diploma in 3rd educational level as a professional. During this thesis or final project, students must write an abstract in Spanish and translate it to English. If students do not have a high level of knowledge in aspects such as: punctuation, style for writing paragraphs (due to an Abstract is a single group of ideas which presentation is a paragraph with specific micro- macro structure, depending on its academic discipline), tense of verbs and personal pronouns appropriated for writing this kind of academic document, key words, etc., they are not going to present a really proper preliminary publication.

11. Do you consider it is required a professional support as a guide in your university for writing an abstract in English before concluding your final project in your major?

Chart 11.1 Opinion about the support of an expert for writing abstracts in English in the final project of majors.

CRITERIA	FREQUENCY	PERCENTAGE
SI	213	81%
NO	14	5%
SIN RESPUESTA	36	14%
TOTAL	264	100%

Graphic 11.2 Opinion about the support of an expert for writing abstracts in English in the final project of majors.



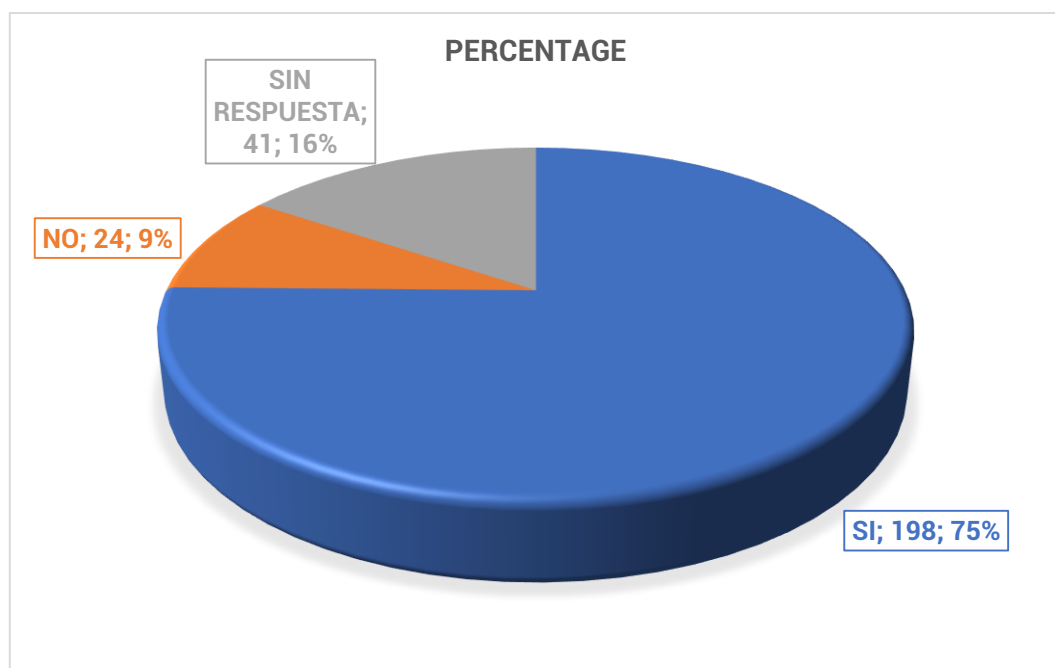
This question showed students' interest for receiving support and previous assistance for writing abstracts in English taking into account the complexity for presenting the proper structure divided in micro and macro according to their academic disciplines seen in their thesis or academic projects. A group of 213 students (81%) indicated affirmatively that they considered it was required a professional support as a guide at the university for writing an abstract in English before concluding their final projects in their majors. A group of 14 students (5%) answered negatively to this indispensable program. And a group of 36 (14%) did not include an answer. For this reason, it was evaluated the necessity to apply the academic program created for support them gradually with rubrics and a single protocol which was the guide for applying it step by step.

12. Would you be interested at participating in a practical program with professional Guidelines for being able to write a required Abstract in Spanish and English in the final Project previous to get a professional Diploma?

Chart 12.1 Interest for participating in academic program for writing abstracts in English and Spanish

CRITERIA	FREQUENCY	PERCENTAGE
SI	198	75%
NO	24	9%
SIN RESPUESTA	41	16%
TOTAL	264	100%

Graphic 12.2 Interest for participating in academic program for writing abstracts in English and Spanish



Based on this graphic, it was identified the relevance of academic training before culminating their academic programs and getting their diplomas at university. A group of 213 students (81%) selected as necessary a program for writing an abstract in English before concluding their final projects. And a group of 36 students (14%) considered that it was not relevant to participate in a training for improving writing of Abstracts. Lastly, 14 students (5 %) did not select any option. A relevant group of students (198, 75%) pointed out their interest to participate in a practical program for improving their knowledge about writing abstracts or preliminary publications. But 24 students (45%) were not interested in this program. Lastly, 41 students did not reply any option included in this question.

After applying the Diagnosis Survey, the academic program was applied to 264 students enrolled in 5th level at Centro Académico de Idiomas-CAI- Universidad Técnica del Norte, located in Ibarra city from Imbabura province in the North region from Ecuador. During this process, students participated in some activities included in the protocol for supporting in their acquisition of skills for improving academic writing specifically focus on preliminary publications.

2.7. ANALYSIS S.O.W.T

2.7.1. STRENGTHS

Related to the Scaffolding method there were some scopes which were noticeable during the process by which the program for improving writing focused on Preliminary publications was implemented:

- The program achieved its objectives for creating a protocol for offering guidelines by which students could follow clear instructions about writing Abstracts before finishing their careers.
- The protocol was created for helping not only students but Faculties in general due to it did not exist a program for supporting students in this crucial process.
- The Preliminary publications as one of the indicators for concluding final undergraduate projects, could be practically recognized according to their academic disciplines.
- The university students involved in this program not only could conclude fast their abstracts but they could replicate to other students their knowledge.
- Formative rubrics per stages were applied as effective resource for evaluating the process by which students acquired new skills for writing Abstracts.

2.7.2. WEAKNESS

- a. Students enrolled in 5th level do not have a program in their faculties so the guidelines for writing abstracts do not exist. The program was not implemented at every faculty owing to it was not mandatory as part of the Academic program for concluding the students' majors at Universidad Técnica del Norte- UTN.

- b. Professors at Universidad Técnica del Norte- UTN involved in the assessment of final projects or thesis have not participated in this program for recognizing issues associated to the presentation of abstracts.
- c. Students do not read articles, journals or scholarly papers within English class for improving their knowledge about technical English associated to preliminary publications due to reading this kind of academic documents are not included in the syllabus used in every semester. According to Hayashi, Ch., (2010) the success for improving scholarly writing depends on reading academically.

2.7.3. OPPORTUNITIES

After working with the sample of population, it was evident to recognize opportunities for increasing knowledge in students, fostering the motivation due to students can be able to write their own abstracts, interaction in collaborative work, avoid transductive reasoning or generalization for writing abstracts focused on dissimilar academic disciplines, improve the time by which students have to conclude this document for finishing their careers at university.

2.7.4. THREATS

Some threats were found during the process in which the population sample of students were included. Among them, firstly it was identified at the end of the program the lack of permanent training that students need per semester. Secondly, teachers who do not teach English involved in this process in whole faculties also need training for guiding properly to students who are culminating their careers. Lastly, if the syllabus for 5th level does not consider a program with timetable for improving academic writing like abstracts or preliminary publications, this program is not going to become permanent for training students.

2.8. STRATEGIES : ST, SO, WO, WT

2.8.1. STRENGTHS AND THREATS

After analyzing the areas in which this project has strengths, it is indispensable to be focused on fortify them instead of change them into threats. One of them could be that the guidelines or the protocol applied were not included within the syllabus for students who were enrolled in the final English level that means in 5th level. The protocol could be just a document applied according to teachers' decision instead of being a document necessary and indispensable for guiding students to write properly and academically.

2.8.2. STRENGTHS AND OPPORTUNITIES

Due to the students' need analyzed for improving an academic scope involved in a crucial aspect for presenting their thesis in which they want to write in Spanish and English their abstracts or preliminary publications, university students have the opportunity to be supported in this program created for them before finishing their careers for developing high abilities in a productive skill like academic writing.

2.8.3. WEAKNESS AND OPPORTUNITIES

Based on the lack of knowledge students have about how to write preliminary publications known as abstracts considered like a weakness for presenting properly their final project previous to get a diploma in 3rd educational level, it can be an opportunity for the whole English teachers to be part of this academic program for supporting undergraduate students to improve this level. All of English teachers can get sufficiency for reading abstracts, analyzing them and being active trainers who can help to improve indicators connected to research which is taken into account for authorities at universities, nationally and Internationally. Commonly, English teachers just teach topics associated to communication so this is the most useful opportunity firstly for learning as guides and secondly being ready to collaborate for incrementing quality, validity, reliability from medium to high rankings in academic projects done in different careers at University.

2.8.4. WEAKNESS AND THREATS

It was detected some weaknesses which can become threats such as: Lack of sufficiency in Academic English, scarcity of a curriculum defined for 5th English level in order to improve writing associated to abstracts or preliminary publications, shortage of teachers trained for supporting students in writing in English in their own faculties could help to disappear the program created for supporting with Scaffolding to our students enrolled in fifth level.

CHAPTER III

PROPOSAL

3.1. SCAFFOLDING AND ACADEMIC WRITING

After applying a diagnostic survey for university students at Universidad Técnica del Norte, it was detected lack of knowledge, guidelines and permanent training as it was evident in question number 9 by which population who participated in this investigation had to include information about if faculties have resources or seminars focused on redacting Abstracts in English and 71% answered negatively showing the needs for creating a program focused on academic training for students and possibly teachers who do not teach English but who are involved in the guidance for helping to write and check abstracts or preliminary publications written by university students in every Faculty in Spanish and English.

In addition, 84% represented by 220 of 264 who were the students implicated in this study showed that they did not know any academic program offered to students enrolled in the final English level (5th) at CAI (Centro Académico de Idiomas) at UTN focused on the process for writing Abstracts in English by which it was relevant to incorporate a training or academic program based on Scaffolding as an appropriate methodology for supporting students at higher education specifically at CAI for writing Abstracts. In this context, it was created a protocol for using it as guide for students and participants in this program and also 3 rubrics applied in dissimilar stages for assessing in formative scopes the development and improvement which students had to show for validating this research. Some of the activities and documents created in this program were inspired by some recommendations based on research done by experts like Heard, S. (2016) who supported the theory by which writing is analyzed as a process associated to a motivational development which improves the production of academic documents emulated with activities such as the revision of first drafts, peer-reviews, guiding about the structure of a scientific document and so on. Scaffolding as a methodology was selected after checking some research articles in the last decade like for instance Van de Pol, J., Volman, M., Beishuizen, J. (2010) who proclaimed that Scaffolding showed its efficiency according to the results of studies about students' metacognitive and cognitive activities known as

complex activities in which it is required a permanent support for developing learning process.

3.2. SCAFFOLDING AND FORMATIVE RUBRICS

According to the protocol, first of all students show their knowledge using a Brainstorming stage in which they complete information about some criteria included in the 1st rubric for supporting their process for improving Academic writing. As Kamal, A., (2015) disclosed in his research, one of the crucial aspect when Scaffolding is applied through formative assessment is to receive feedback where students are committed with their activities of writing for improving them without being concerned about judgements categorized as proper or not. Absolum, M. (2011) showed in his book some aspects which give clear results associated to the process of learning through formative rubrics such as:

- Independent evaluation of the participants even teachers focus on their quality of their thinking.
- The comprehension of concepts is improved through the assessment of quality of teaching and learning.
- The motivation improves due to the commitment of students when they use formative rubrics.

As evidence of the lack of knowledge for writing abstracts, an abstract was selected for showing the crucial needs for implementing a program for helping and supporting students to write preliminary publications. The abstract seen below was written by a student who concluded with his career in Engineering. That student finished his studies at Faculty and even the whole English levels but this student did not participate in any specific program in his faculty or at Centro Académico de Idiomas for writing properly. As part of the materials created for supporting Scaffolding methodology, it was prepared the first rubric selected as Initial rubric, owing to the fact that university students were recognizing individually their knowledge about specific criteria based on writing of abstracts or preliminary publications. As evidence of the transductive reasoning by which students consider that an abstract should be written in a single format, a sample is shown below. This abstract was written by a student without a previous training designed by faculties or Centro Académico de Idiomas-CAI-UTN. There were some mistakes after

being analyzed carefully in the program implemented for improving academic writing developed by undergraduate students. (Heard, 2016)

RESUMEN.

El presente trabajo de grado se enfoca en el montaje de motores brushless, en una silla de ruedas manual convencional, minimizando el peso a comparación a una silla de ruedas eléctrica comercial. Esta silla de ruedas se desplaza a través del uso de un Joystick (Palanca de mando) y un sistema de control basado en Arduino.

En el desarrollo del prototipo de la silla de ruedas eléctrica se emplearon motores eléctricos de corriente continua (C.C) con un alto índice de eficiencia. Para controlar estos motores se acopló un **EM-151B BRUSHLESS DC MOTOR DRIVE**, comandado desde un Arduino MEGA, para la alimentación de energía del sistema de potencia y de control, se empleó una batería eléctrica recargable de fosfato de hierro de litio de última generación y amigable con el medio ambiente.

A continuación, se presenta una breve descripción de cada capítulo:

CAPÍTULO I: Se describe los aspectos referentes al planteamiento del problema.

CAPÍTULO II: Contiene conceptos teóricos fundamentales para el desarrollo del tema.

CAPÍTULO III: Describe los métodos útiles para el avance de la investigación.

CAPÍTULO IV: Se desarrolla la propuesta, del diseño y construcción de una silla de ruedas de ruedas eléctrica para discapacitados.

CAPÍTULO V: Conclusiones y Recomendaciones, obteniendo los resultados más representativos del proyecto final.

ANEXOS: Programación en código C, Fotografías del proyecto de tesis y Diagramas

Author: Linda López Intriago (August,2017)

This abstract has some mistakes in micro and macro structure according to its discipline, in this case Applied Science. It is required to be written in a single paragraph instead of some independent sentences. Also, it is not indispensable to include chapters of the investigation but the methodology, materials, statistical information, full proper names instead of acronym, conclusions and recommendations. This abstract is one of the abstracts used for analyzing mistakes related to the underpinning information required for presenting it. This previous abstract becomes the 1st material used in brainstorming phase (Scaffolding stage) for getting previous knowledge and after that students can analyze the 1st rubric for assessing their independent knowledge. This first rubric can be applied according to the steps given in Scaffolding process related to Bruner's theory (2009) based on Brainstorming stage by which learners starts their activity recognizing their own knowledge previous to acquire a new skill.

3.3. RUBRICS-STAGE 1: INITIAL

RUBRIC 1 -INITIAL STAGE-BRAINSTORMING					
SELF- REFLECTION					
CRITERIA	STAGE 1-BEGINNER	STAGE 2-DEVELOPING	STAGE 3-PROGRESSING	STAGE 4-ADVANCED	COMMENT
CLASSIFICATION OF ABSTRACTS/ DISCIPLINES	Student can poorly recognizes the scope of an abstract or preliminary publication	Student fairly distinguishes Academic disciplines for writing the correct Abstract.	Student occasionally can recognize Academic disciplines of Abstracts.	Student can rightfully recognizes the classification of abstracts according to the disciplines	
LANGUAGE (SPANISH-ENGLISH)	Student hesitates for including appropriated evidence of coherence in the information included in the abstract -	Student rarely associates his/her native language with the information it is required in a second language	Student shows a consistent Transductive reasoning focus on the parameters included in bilingual writing	Student accurately knows how to write an Abstract in bilingual form.	
STYLE OF ABSTRACTS / MICRO COMPONENTS OF ABSTRACTS	Student shows plenty of grammatical mistakes, lack of academic lexis and even redundancy in the content of the preliminary publication.	Student shows occasional errors of spelling, punctuation, capitalization, paragraphing and a few Academic expressions.	Student shows limited errors of spelling, punctuation, capitalization, paragraphing and redundancy	Student properly identifies the grammatical structure included in the abstract based on a specific Academic discipline.	
MACRO-COMPONENTS OF ABSTRACTS	Student does not recognize the proper macro-components of Abstracts	Students shows an overall conception about macro-components of abstracts	Student occasionally recognizes some aspects about macro-components of Abstracts according to the Academic discipline	Student appropriately identifies macro-components of abstracts according to the scope	

Designed by the Author: Linda López Intriago (June, 2017)

The rubric was created in order to give practical support to students and trainers or teachers for following an organized and permanent process with responsibility and ethic too. These criteria shown in the graphic include some parameters for assessing the process by which students are starting this initial stage. Before starting the Academic training, students must be grouped for getting familiar with this first rubric which was designed for supporting them in the process known as Scaffolding. During this previous stage students had to indicate their knowledge about four criteria: Classification of Abstracts & Disciplines, Written section about Abstracts in Spanish and English, Style of Abstracts or elements known as micro-components and lastly, macro-components. For every criteria student had to select specific stages for checking their progress during the whole process of improving Preliminary publications. There were four columns for representing stages related to every single criterion. The following stages were considering terms based on the development for improving appropriately preliminary publications or abstracts: 1st stage: beginning, 2nd stage: developing, 3rd stage: progressing, 4th stage: extending or advancing. Additionally, was included the section of comments for probable problems students could identify.

Most of them, in their initial stage will not show previous knowledge about the criteria presented in this 1st Rubric so they must select the first column, stage 1 for beginner which represent their initial period without previous knowledge. related to classification of abstracts and disciplines, verbally and written, students should indicate information about how abstracts are classified based on Social and Humanities Sciences and also Sciences and Applied Sciences and, in addition about parameters (similarities and differences) based on Abstracts in Spanish and English, style of abstracts (Grammar). In summary, elements known as micro-components and lastly, macro-components. Finally, it was designed an extra row for giving the opportunity to students to include their comments according to the criteria which is analyzed independently.

3.4. RUBRICS -STAGE 2: INTERMEDIATE

RUBRIC 2 -INTERMEDIATE STAGE					
PEER- ASSESSMENT					
CRITERIAS	STAGE 1-BEGINNING	STAGE 2-DEVELOPING	STAGE 3-PROGRESSING	STAGE 4-EXTENDING	COMMENT
FEEDBACK	Students can poorly give information for supporting each other and reinforcing the scope for improving writing based on abstract or preliminary publication	Students are fairly able to distinguish Academic disciplines for writing the correct Abstract and supporting each other.	Students occasionally can support each other with proper information about the style and structure of Abstracts.	Student can rightfully support each other for recognizing the classification of abstracts according to the disciplines	
PEER-COLLABORATION	Student hesitates for participating in the tasks assigned focus on the abstract -preliminary publication.	Student rarely associates his/her native language with the information it is required in a second language	Student shows a consistent Transductive reasoning focus on the parameters included	Student accurately knows how to write an Abstract in bilingual form.	
TIME-MANAGEMENT	Student shows lack of management of time for recognizing microstructure and macrostructure of abstracts easily .	Student shows regular organization of time for selecting errors of spelling, punctuation, capitalization, paragraphing and a few Academic expressions.	Student occasionally is able to manage timing for recognizing some aspects about macro-components of Abstracts according to the Academic discipline	Student appropriately manage timing for analyzing macro-components and style of abstracts according to the scope.	
LEADERSHIP / PERSISTANCE	Student did not keep the persistence for completing his / her assigned tasks according to the protocol designed for improving Academic writing based on abstracts.	Student shows a reduced management about timing for indentifying macro and micro components of abstracts	Student shows a permanent attitude toward analyzing and presenting activities related to Abstracts-Style and structure.	Student properly shows their abilities for Academic Writing based on improving Preliminary Publications.	

< >
Initial Stage
Intermediate Stage
FINAL STAGE
+

Designed by Linda López Intriago (June, 2017)

After participating in the academic training program and after the initial stage in which it is applied the 1st rubric, university students can use their 2nd rubric known as Peer-Assessment in intermediate stage or 2nd phase for detecting their weaknesses or development and progress after working in pairs during the semester (It is recommendable to apply 2 months for 2nd and 3rd stage for analyzing and detecting

weaknesses and strengths) for improving academic writing. As Ulster University (2016) recommend us, students need a training for being able to assess indicators such as:

1. Feedback, students receive from each other in order to know their strengths or weakness in collaborative work. As Cano, E., Ion, G. (2016) disclosed in their research, feedback not only is related to uncover the level of student's comprehension but also it is the resource by which it is feasible to improve student's progress in the learning process. Thereby, Feedback provides information required for supporting the program created for improving academic writing. Additionally, Falchikov, N. (2013) disclosed that in Formative assessment, feedback is a key factor. As Jonsson, A. (2013), the students' performance must be assessed according to specific standards or criteria given previously as a premise in the process of supporting with feedback. Lastly, one of the issues when appears lack of strategies is that the productivity in students' feedback is reduced, as Jonsson, A. (2013) mentioned in his research. Taking into consideration these principles, it was included within criteria, Feedback as one the first item in the formative rubric for applying on intermediate stage.
2. Peer-collaboration by which students assess their work in pairs as a meaningful aspect for supporting activities related to analysis of Abstracts in collaborative work. The core in this section of this rubric is focused on the assessment of the activities in pairs due to the valuable feedback between students. As Keup, J. (2012) shows in his research work, Peer collaboration facilitates a deep cognitive outcome. Also, when academic activities are adjusted on peer-collaboration, their results are aligned in a seamless education or reinforced to pragmatic more than theoretical framework.
3. Time management based on the accuracy that university students can show for recognizing the proper structure of abstracts given for their analysis. Basically, students can detect if they can recognize in less time easily or with many difficulties the tasks related to the criteria shown in the second part in the 1st row from this rubric.

4. Leadership / persistence as an indicator for assessing crucial characteristic which is assessed in students when they work in pairs or groups for analyzing if they can feel motivation working individually, in teams or if they show frustration and lack of leadership involved in this activity. As Keup, J. (2012) indicated, the efficient way to support and influence students for achieving high learning outcomes in 21st century is based on the inclusion of peer leadership as an icon for developing students' learning, thereby leadership was included as part of the 2nd rubric in order to assess formatively this relevant item.

5. At the end, it was included an extra row in which students involved in this activity can include optionally comments about observations in this phase. The current rubric shows how students can work in pairs according to their activities related to the analysis of abstracts in Spanish and English given after the training program. The trainer, or expert in this process does not have the main role but students and their respective analysis supported in pairs with the respective rubric. During this second period, the different columns represent their final work done in pairs. All of them according to their supported activities.

Identifique la macroestructura y microestructura correcta del siguiente Abstract de acuerdo a las rúbricas empleadas en el programa académico para redacción:

RESUMEN

Realizamos una investigación de tipo evaluativa, con el objetivo de elevar el nivel de conocimiento sobre el embarazo en la adolescencia, mediante la aplicación de un programa educativo en adolescentes de la Unidad Educativa "Madre Teresa Bacq".

La muestra quedó conformada por 31 adolescentes; a los que se aplicó un cuestionario al iniciar y culminar la investigación, los resultados reflejan que la mayoría de adolescentes tiene la edad de 17 años y el sexo femenino fue mayoritario. Antes y después de aplicar la estrategia de intervención educativa, encontramos que 31 adolescentes tenían un nivel de conocimiento alto sobre la edad óptima para la concepción. Del total de adolescentes, inicialmente 27, tenían conocimientos bajos sobre la anticoncepción y después del desarrollo de la intervención, 14 incrementaron sus conocimientos a un nivel alto.

Sobre complicaciones del embarazo en la adolescencia, el nivel de conocimientos inicialmente era bajo, después, 12 adolescentes lo elevaron a un nivel alto y 16 a un nivel medio. Sobre aborto y sus complicaciones en la adolescencia, encontramos que antes de la intervención 20 adolescentes poseían niveles bajos de conocimiento, 6 de ellos conocimientos medios y solo 5 conocimientos altos. Después de aplicada la actividad educativa, un total de 20 estudiantes, el 64,5%, elevaron su conocimiento a un nivel alto, 9 al nivel medio y 2 se mantuvieron en el nivel bajo.

Finalmente nosotros elevamos significativamente el nivel de conocimiento acerca del embarazo en la adolescencia por lo que el Programa Educativo se evaluó como efectivo.

PALABRAS CLAVES: Adolescencia, embarazo en la adolescencia, intervención educativa.

Comentado [MJAM13]: Falta el título.

Comentado [MJAM14]: Resumen Informativo

Comentado [MJAM15]: Este resumen habla en 1ª persona y lo correcto es hablar en 3ª persona y pasado, sería "Se realizó".

Comentado [MJAM16]: Objetivo del resumen y metodología.

Comentado [MJAM17]: Está saltadas las líneas.

Comentado [MJAM18]: Se debe usar el tiempo en pasado, debería ser "reflejaron".

Comentado [MJAM19]: No se debe informar en terceras personas, debería ser "Se encontró".

Comentado [MJAM20]: Resultado del resumen de la investigación.

Comentado [MJAM21]: No se debe informar en 1ª persona, debería ser "Se elevó".

Comentado [MJAM22]: Conclusión del resumen.

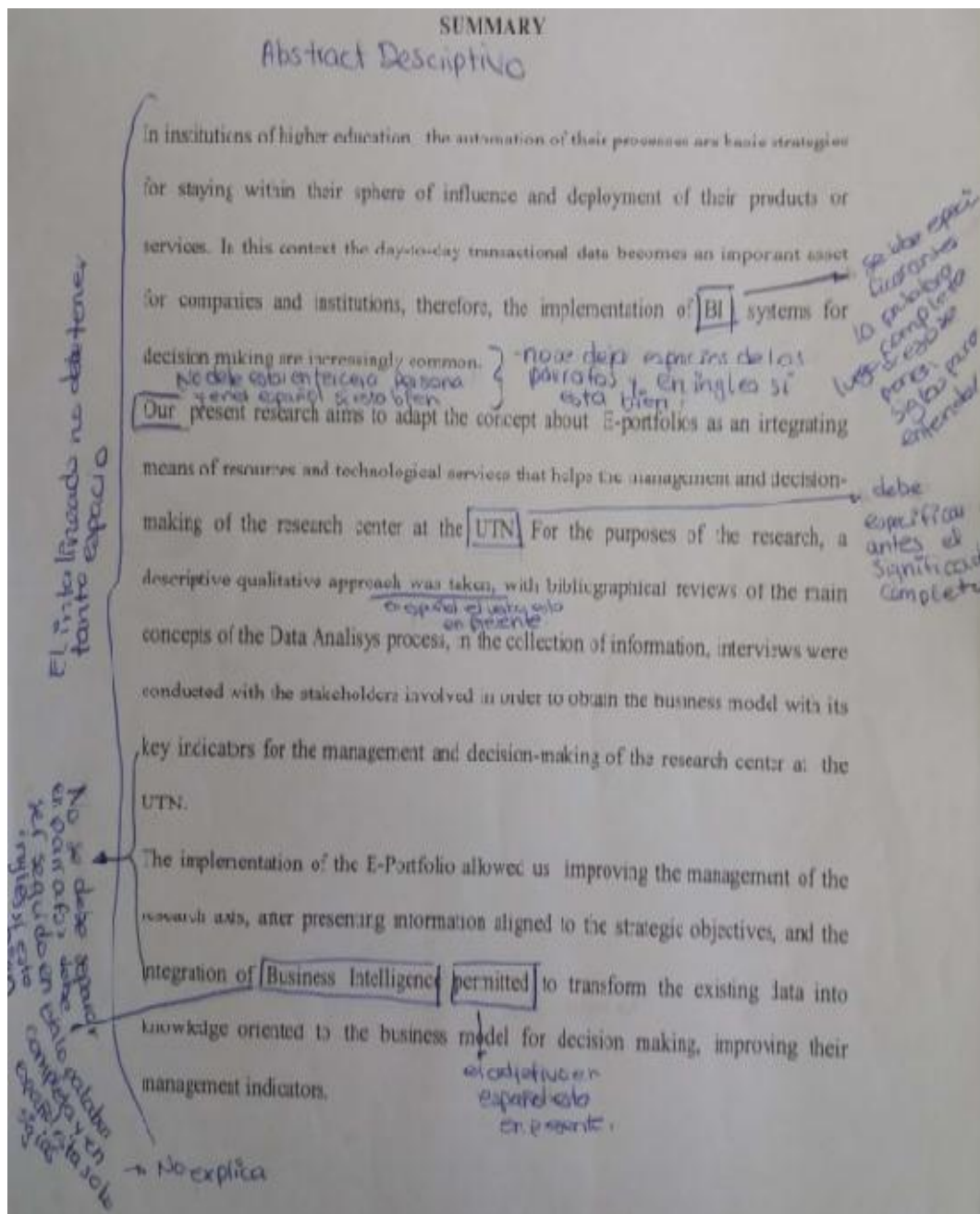
Comentado [MJAM23]: Falta redactar las recomendaciones.

Comentado [EAOR24]: Cuenta solamente con 3 palabras claves y lo recomendado es de 6 a 8 palabras.

Author:

Linda López Intriago (September, 2017)

According to this analysis done by students, it was evident their work for recognizing Micro and macro-components after writing abstracts. This image represents a final document or abstract analyzed by student for reinforcing their assessment of the comprehension by which undergraduate students must write a preliminary publication. All the observations in color pink and light blue were done during the program created for improving academic writing.



Author: Linda López Intriago (September,2017)

The image above shows us the intensive analytically work done by students in peer-assessment for recognizing mistakes in academic writing focused on abstracts or preliminary publications.

After reading next abstract, identify the mistakes in macro and microstructure using the rubrics given in this Academic program for writing Preliminary

Publications:

SUMMARY

An evaluative research was carried out for increasing the level of knowledge about adolescent pregnancy, through an educational program applied for a group of adolescents in "Mother Teresa Bacq" Educational Unit. The sample was integrated by 31 adolescents who were evaluated using a questionnaire which was applied before and after finishing this research.

Our results showed that the majority of adolescents were 17 years old and the female sex was the majority. Before and after applying the strategy using educational intervention, we found that 31 adolescents had a high level of knowledge about the optimal age for conception. From the total number of adolescents, initially 27 of them had low knowledge about contraception and after developing the intervention, 14 of them increased their knowledge in a high level. About complications of pregnancy in adolescence, the level of knowledge was initially low, then 12 adolescents had a high level and 16 had a medium level.

About abortion and its complications in adolescence, we found that before the intervention 20 adolescents had low levels of knowledge, 6 of them had an average knowledge and only 5 had high knowledge.

After applying the educational activity, a total of 20 students, 64.5%, increased their knowledge in a high level, 9 of them had an average level and 2 remained at a low level. Lastly, the level of knowledge about pregnancy during adolescence was significantly increased and the Educational Program was evaluated as effective.

KEY WORDS: adolescence, adolescent pregnancy, educational intervention

Comentado [EAOR12]: Falta el título del resumen.

Comentado [EAOR13]: Resumen Informativo

Comentado [AVCF14]: No debe utilizarse la primera persona, sino solo tercera persona, por ello debería ser "were".

Comentado [EAOR15]: Objetivo del resumen y metodología.

Comentado [EAOR16]: Están saltadas las líneas, y debe solo el resumen en un solo párrafo.

Comentado [EAOR17]: No debe utilizarse la primera persona, sino solo tercera persona, por ello debería ser "The results".

Comentado [EAOR18]: Están saltadas las líneas, y debe todo el resumen en un solo párrafo.

Comentado [EAOR19]: Están saltadas las líneas, y debe todo el resumen en un solo párrafo.

Comentado [EAOR20]: Resultado del resumen de la investigación.

Comentado [EAOR21]: Falta las recomendaciones.

Comentado [EAOR22]: Conclusión del resumen.

Comentado [EAOR23]: Cuenta con tan solo 3 palabras claves, y lo normal es de 6 a 8.

Author: Linda López Intriago (September,2017)

The students involved during this program increased their knowledge for checking deeply every parameter related to the proper way for writing abstracts after noticing common mistakes done for undergraduate students who were not participating in this process for improving academic writing.

En las instituciones educativas de nivel Superior, la automatización de sus procesos son estrategias básicas para la permanencia dentro de su ámbito de influencia y despliegue de sus productos o servicios. En este contexto, la data transaccional del día a día se vuelve un activo importante para las empresas e instituciones, por lo tanto, nosotros identificamos la implementación de BI para la toma de decisiones debido a que son cada vez más comunes. La presente investigación según Gardner (2010) adapta el concepto de E-portafolios como medio integrador de recursos y servicios tecnológicos que ayude a la gestión y la toma de decisiones del eje de investigación de la UTN. Para efectos de la investigación se toma un enfoque cualitativo descriptivo, con revisiones bibliográficas de los principales conceptos del proceso de Data Analysis, en la recolección de información se realizan entrevistas a los stakeholder involucrados con el fin de obtener el modelo de negocio con sus indicadores claves para la gestión y toma de decisiones del eje de investigación de la UTN. La implementación del E-Portafolio permite mejorar la gestión del eje de investigación, presentando información alineada a los objetivos estratégicos, además la integración de BI permite transformar los datos existentes en conocimiento orientado al modelo del negocio para la toma de decisiones, logrando mejorar sus indicadores de gestión.

Palabras Clave: E-Portafolio, BI, DW, Indicadores de gestión de Investigación, UTN.

Author: Linda López Intriago (September,2017)

Analysis done by students using colors below every section analyzed by them according to the instructions given in the Academic program.

Redacción primera persona	■
Citas bibliográficas	■
Metodología	■
Conclusiones	■
Palabras Clave	■

Problemas encontrados:

- La redacción está hecha en primera persona
- Citas bibliográficas
- No hay recomendaciones
- No está redactado en un solo párrafo.
- Necesita mayor redacción, alcanzar un mayor número de palabras.
- Presenta abreviaturas.

Author: Linda López Intriago (September,2017)

This analysis belongs to the previous abstract in which students recognize different problems related to the specific indicators aligned to macro and micro-structure such as the redaction in 1st person, references, the structure in a single paragraph, more specific explanation and, acronyms.

Realizamos una investigación de tipo evaluativa, con el objetivo de elevar el nivel de conocimiento sobre el embarazo en la adolescencia, mediante la aplicación de un programa educativo en adolescentes de la Unidad Educativa "Madre Teresa Bacq".

La muestra quedó conformada por 31 adolescentes; a los que se aplicó un cuestionario al iniciar y culminar la investigación, los resultados reflejan que la mayoría de adolescentes tiene la edad de 17 años y el sexo femenino fue mayoritario.

Antes y después de aplicar la estrategia de intervención educativa, encontramos que 31 adolescentes tenían un nivel de conocimiento alto sobre la edad óptima para la concepción. Del total de adolescentes, inicialmente 27, tenían conocimientos bajos sobre la anticoncepción y después del desarrollo de la intervención, 14 incrementaron sus conocimientos a un nivel alto.

Sobre complicaciones del embarazo en la adolescencia, el nivel de conocimientos inicialmente era bajo, después, 12 adolescentes lo elevaron a un nivel alto y 16 a un nivel medio. Sobre aborto y sus complicaciones en la adolescencia, encontramos que antes de la intervención 20 adolescentes poseían niveles bajos de conocimiento, 6 de ellos conocimientos medios y solo 5 conocimientos altos. Después de aplicar la actividad educativa, un total de 20 estudiantes, el 64,5%, elevaron su conocimiento a un nivel alto, 9 al nivel medio y 2 se mantuvieron en el nivel bajo.

Finalmente nosotros elevamos significativamente el nivel de conocimiento acerca del embarazo en la adolescencia por lo que el Programa Educativo se evaluó como efectivo.

PALABRAS CLAVES: Adolescencia, embarazo en la adolescencia, intervención educativa.

Author: Linda López Intriago (September,2017)

In this abstract, students analyzed other academic discipline which was linked to other type of redaction by which they had to determine if the whole information was well-written or it had instability for being accepted as an academic document.

MACROCOMPONENTES: Los macro componentes del resumen fueron los siguientes: Propósito – Objetivo (color rojo), Métodos (color negro) de manera que no presenta el ámbito de investigación, y en lugar de ello presenta resultados y conclusiones.

MICROCOMPONENTES: En cuanto a los micro componentes presentados se observa muchos errores tales como:

- Redacción no realizada en tercera persona.
- Presencia de 4 párrafos.
- Presencia de frases dentro de un total de 3 palabras claves
- Estructura desorganizada.

Por otro lado, presenta un total de 256 palabras incluidas las palabras claves y no hay presencia de ningún gráfico.

Author: Linda López Intriago (September,2017)

This final analysis verified the progress of students' knowledge acquired during the implementation of Scaffolding as a methodology. Although, students were not specialists in the scope in which the abstract was selected at random for working with them, it was notorious their development for establishing optimal parameters for writing an abstract written by undergraduate students. Other aspect, it is relevant to notice is based on the transductive reasoning that they could indicate taking into account that most of university students present abstracts without knowledge about academic disciplines, different types of abstracts such as descriptive and informative and as a result of lacking of knowledge their abstracts are not well- presented.

3.5. RUBRICS - STAGE 3: FINAL

RUBRIC 3 -FINAL STAGE					
SELF- ASSESSMENT					
CRITERIAS	STAGE 1-BEGINNIN	STAGE 2-DEVELOPING	STAGE 3-PROGRESSING	STAGE 4-EXTENDING	COMMENT
CLASSIFICATION OF ABSTRACTS/ DISCIPLINES	Student can poorly recognizes the scope of an abstract or preliminary publication	Student fairly distinguishes Academic disciplines for writing the correct Abstract.	Student occasionally can recognize Academic disciplines of Abstracts.	Student can rightfully recognizes the classification of abstracts according to the disciplines	
LANGUAGE (SPANISH-ENGLISH)	Student hesitates for including appropriated evidence of coherence in the information	Student rarely associates his/her native language with the information it is required in a second language	Student shows a consistent Transductive reasoning focus on the parameters included in bilingual writing	Student accurately knows how to write an Abstract in bilingual form.	
STYLE OF ABSTRACTS / MICRO COMPONENTS OF ABSTRACTS	Student shows plenty of grammatical mistakes, lack of	Student shows occasional errors of spelling, punctuation,	Student shows limited errors of spelling, punctuation, capitalization,	Student properly identifies the grammatical structure included	
MACRO-COMPONENTS OF ABSTRACTS	Student does not recognize the proper macro-components of Abstracts	Students shows an overall conception about macro-components of abstracts	Student occasionally recognizes some aspects about macro-components of Abstracts according to the Academic	Student appropriately identifies macro-components of abstracts according to the scope	

Designed by Linda L. López Intriago (June,2017)

As final stage, university students must work individually in order to identify their development in this process. This rubric allows students to assess their ability to identify and analyze dissimilar Abstracts written in different disciplines such as:

- Social Science & Humanities, Applied Science and Sciences. Additionally, they recognized through this rubric their development in criteria like classification of Abstracts, Language, Micro components, and macro-components.

- Below it is noticeable in some abstracts which were used for students, their effort in the process for improving writing, recognizing weaknesses:

**"DESIGN AND CONSTRUCTION OF AN ELECTRIC WHEELCHAIR
PROTOTYPE, APPLYING BRUSHLESS MOTORS (OUTRUNNER)"**

SUMMARY

The present work of degree was focused on the set up of brushless electric engines in a conventional manual wheelchair reducing weight in contrast to an electric wheelchair commercial. This design is mobilized according to the use of a joystick and a control system based on Arduino software, offering a better mobility solution. **Materials and Methodology.** In the development of the prototype were used brushless DC engines with 79% energetic efficiency, which allows optimizing parameters such as space, weight, noise and vibrations due to the reduced number of mechanical elements that produce friction in this type of devices. In order to control these motors was coupled an EM-151B BRUSHLESS DC driver which was controlled by an Arduino Mega and directed by an omni directional system through industrial joystick modified. For the power supply of the power and control system, a rechargeable, state-of-the-art lithium iron phosphate rechargeable battery of latest generation and environmentally friendly was used. A voice control was added to stop the wheelchair and prevent collisions. **Conclusions and results.** An electric traction system was developed on a conventional manual wheelchair in order to the optimization in the mobility of people with limited physical abilities through the usage of specific commands and voice messages in the system as innovative alternative for its control, inform the user about the direction and stop the movement under critical conditions.

Key words: Prototype, wheelchair, joystick, Arduino, mobility, optimizing, electric traction, voice control.

Author: Linda López Intriago (September,2017)

After checking some abstracts, students finally presented this abstract as their evidence for showing the learning outcomes. Furthermore, it was written its analysis for reinforcing the respective analysis.

ANÁLISIS

La publicación preliminar pertenece a la disciplina académica de Ciencias Aplicadas por lo que es un abstract informativo, con relación a la Macro estructura el texto está redactado de acuerdo a los componentes necesarios para su elaboración, a excepto de las recomendaciones. Con respecto a la Microestructura el resumen cumple con todos los componentes de abstract informativo, es decir, se encuentra redactado de forma correcta lo que permite al lector identificar de forma rápida y precisa el contenido del trabajo.

Author: Linda López Intriago. (September,2017)

This analysis done by students could detect practically common issues which interfere for an acceptable preliminary publication written by an undergraduate student when concluded his / her final university project. Lastly, for reinforcing this procedure based on formative assessment, it is relevant to clarify that as Brown, G., Bull, J., Pendlebury, M. (2013) showed in their research, Formative assessment is used for improving the process of acquisition of knowledge known as learning process instead of being applied for getting grades and passing a program, a semester or a year.

3.6. SCAFFOLDING AND PROTOCOL

The protocol applied in this Academic program was created according to the specific parameters for showing an organized activity for managing time, resources, population. The document implies to work all the stages seen above in Scaffolding methodology for supporting students. The trainer or expert can use this protocol as a guideline for starting the process. The format requires to divide in some stages to support with rubrics in : Initial, Intermediate and Final stage showed below:



**PONTIFICIA UNIVERSIDAD CATÓLICA DEL
ECUADOR SEDE IBARRA
PUCESI**

**PROTOCOLO DE ESCRITURA ACADÉMICA BILINGÜE:
PUBLICACIONES PRELIMINARES O ABSTRACTS**

Objetivo

Mejorar la redacción de publicaciones preliminares (español-inglés) de estudiantes universitarios en su último periodo de estudio previo a obtener su título académico profesional de tercer nivel.

1. BRAINSTORMING (COMPILATION)

- 1.1 WHAT IS AN ABSTRACT ?
 - 1.2 DOES AN ABSTRACT HAVE A SINGLE FORMAT ?
 - 1.3 HOW MANY PARAGRAPHS DOES AN ABSTRACT HAVE ?
 - 1.4 ACCORDING TO THE ACADEMIC DISCIPLINES, HOW MANY TYPES OF ABSTRACTS ARE APPLIED ? WRITE THE PROPER NAMES.
 - 1.5 WHAT IS A PRELIMINARY PUBLICATION?
 - 1.6 DO YOU KNOW WHAT IS THE CORRECT STRUCTURE OF PRELIMINARY PUBLICATIONS? DESCRIBE IT.
 - 1.7 ARE ACRONYMS PART OF THE STRUCTURE OF ABSTRACTS ?
 - 1.8 ARE GRAPHICS AND CITATIONS ELEMENTS FOR BEING INCLUDING IN UNIVERSITY STUDENTS' ABSTRACTS ?
 - 1.9 IS ENGLISH THE LANGUAGE USED FOR PUBLISHING SCIENTIFIC RESEARCH? WHY?
 - 1.10 IS AN ABSTRACT IN ENGLISH SIMILAR TO AN ABSTRACT IN SPANISH ?
- INITIAL STAGE : FORMATIVE RUBRIC / SELF-REFLECTION

2. OUTLINE

- 2.1 ABSTRACT: PURPOSE
- 2.2 PRELIMINARY PUBLICATIONS AND ABSTRACTS
- 2.3 GENERAL STRUCTURE
- 2.4 TRANSDUCTIVE REASONING: COMMON MISTAKES
- 2.5 ACADEMIC DISCIPLINES
 - 2.5.1 SOCIAL SCIENCES
 - 2.5.2 HUMANITIES
 - 2.5.3 SCIENCES

- 2.7 MACRO-STRUCTURE
 - 2.5.1 ACADEMIC DISCIPLINES
 - INTRODUCTION
- 2.8 MICRO-STRUCTURE
 - 2.6.1 ACADEMIC DISCIPLINES
- 3. ROUGH DRAFT / MODELLING
 - 3.1 ANALYSIS OF ACADEMIC DISCIPLINES
 - 3.1.1 SOCIAL SCIENCE & HUMANITIES
 - 3.1.2 SCIENCE AND APPLIED SCIENCE
 - 3.1 ANALYSIS OF MACRO-STRUCTURE
 - 3.1.1 ACADEMIC DISCIPLINES: SIMILITUDES AND DIFFERENCES
 - 3.2 ANALYSIS OF MICRO-STRUCTURE
 - 3.2.1 ACADEMIC DISCIPLINES: SIMILITUDES AND DIFFERENCES
- 4. REVISING AND RUBRICS
 - 4.1 ANALYSIS OF INFORMATIVE ABSTRACTS :
 - ACADEMIC DISCIPLINE, MACRO-STRUCTURE, MICRO-STRUCTURE (COLLABORATIVE WORK).
 - 4.2 ANALYSIS OF DESCRIPTIVE ABSTRACTS:
 - ACADEMIC DISCIPLINE, MACRO-STRUCTURE, MICRO-STRUCTURE (COLLABORATIVE WORK).
 - INTERMEDIATE STAGE: FORMATIVE RUBRIC/ PEER-ASSESSMENT
- 5. FINAL EDITION
 - 5.1 ANALYSIS OF INFORMATIVE ABSTRACTS : INDIVIDUAL TASK
 - 5.1.1 ACADEMIC DISCIPLINES
 - 5.1.2 MACRO-STRUCTURE
 - 5.1.3 MICRO-STRUCTURE
 - 5.2 ANALYSIS OF DESCRIPTIVE ABSTRACTS: INDIVIDUAL TASK
 - 5.2.1 ACADEMIC DISCIPLINES
 - 5.2.2 MACRO-STRUCTURE
 - 5.2.3 MICRO-STRUCTURE
 - FINAL STAGE: FORMATIVE RUBRIC /SELF- ASSESSMENT

Author: Linda López Intriago (August, 2017)

3.7. DIAGNOSTIC PROBLEM

Due to lack of an academic program created for supporting students in the complex task for writing preliminary publications or abstracts, they commonly look for common translators like google has designed without a sophisticated dictionary for helping in the translation of uncommon words used academically. Most of students even write without a proper support of their advisors in their native language. It was included a real abstract written by a student who firstly wrote the information in Spanish and after reading it was identified a crucial and evident problem in this abstract as it is noticeable below:

RESUMEN.

El presente trabajo de grado se enfoca en el montaje de motores brushless, en una silla de ruedas manual convencional, minimizando el peso a comparación a una silla de ruedas eléctrica comercial. Esta silla de ruedas se desplaza a través del uso de un Joystick (Palanca de mando) y un sistema de control basado en Arduino.

En el desarrollo del prototipo de la silla de ruedas eléctrica se emplearon motores eléctricos de corriente continua (C.C) con un alto índice de eficiencia. Para controlar estos motores se acopló un **EM-151B BRUSHLESS DC MOTOR DRIVE**, comandado desde un Arduino MEGA, para la alimentación de energía del sistema de potencia y de control, se empleó una batería eléctrica recargable de fosfato de hierro de litio de última generación y amigable con el medio ambiente.

A continuación, se presenta una breve descripción de cada capítulo:

CAPÍTULO I: Se describe los aspectos referentes al planteamiento del problema.

CAPÍTULO II: Contiene conceptos teóricos fundamentales para el desarrollo del tema.

CAPÍTULO III: Describe los métodos útiles para el avance de la investigación.

CAPÍTULO IV: Se desarrolla la propuesta, del diseño y construcción de una silla de ruedas de ruedas eléctrica para discapacitados.

CAPÍTULO V: Conclusiones y Recomendaciones, obteniendo los resultados más representativos del proyecto final.

ANEXOS: Programación en código C, Fotografías del proyecto de tesis y Diagramas

According to the macro-components, this abstract has not included an organized scheme based on its discipline which is Applied sciences (Engineering). The structure which is not seen was a proper redaction in micro-components, macro components in Spanish, so the student immediately made a mistake using online translators. If the abstracts has not well written in Spanish, the abstract is rejected in a second language too.

As Cheng-Wen, H., & Archer, A. (2017) entails, academic written activities do not have development in social vacuum, so this author suggest the usage of an approach for supporting students during these complex tasks in higher education. In this context, Scaffolding was selected for helping students to analyze and write abstracts properly.

Issues detected after analyzing the abstract included previously:

1. Discipline: Applied Sciences. According to this discipline the abstracts requires to include a specific macro-structure such as: Introduction, method, statistic, materials, results and recommendations.
2. Micro-structure: Verbs in passive voice are not seen completely in the information given, lack of conjugation in 3rd person instead of 1st person. The classification per chapters of the information included in the thesis or final undergraduate project is not required. Key words needed for identifying the core of the research or investigation are absent in this document. Redundance is noticeable. There are some sentences isolated while it should be written in a single paragraph.
3. Macro-structure: Introduction, method, statistic, materials, results and recommendations are the components required in an Abstract from Applied Sciences (engineering) and they were not seen in this sample.
4. Other fundamental component in an abstract was lack of Key words for being easily recognized when someone wants to search on internet a topic related to the research done. The recommendation of the experts suggest to include 6 words as minimum at the end of the document or abstract.

CHAPTER IV

IMPACTS

4.1. SCIENTIFIC IMPACT.-

Research in Higher Education has been one of the most analyzed and restructured scopes all over the world by Educational organizations. According to the Organic Law of Higher Education or LOES (2010) within the principles of the System of Higher Education, Title I, chapter 3 article 13, literals a, b, c, d and ñ are focused on promoting, Form, guarantee and promote the creation, development, transmission and development of science. Accordingly, the present research focused on the implementation of Scaffolding for the optimization of the English writing of preliminary publications originates as academic support in the process focused on academic writing that is executed at the level of Higher Education at the Universidad Técnica del Norte -UTN to reduce the shortcomings in the understanding and writing of documents summarizing the information presented in researches of final projects due to the lack of a program with specific methodology for the presentation of preliminary publications of scientific material for improving writing and thus be able to comply focused on indicators stipulated by LOES (2010).

4.2. SOCIAL IMPACT.-

According to the Vision of the Universidad Técnica del Norte - UTN, it is indicated that it will be a national and international reference in the development of science, and to execute the vision that represents the UTN, the present investigation is executed to verify if within the English language teaching there are academic resources in conjunction with the techniques supported by an appropriate methodology that support the Institutional vision and as a result to be able to improve the understanding, writing and presentation of specific information related to research topics Bilingual students with a scientific approach.

4.3. ETHICAL IMPACT-

Tight, M. (2012), indicates in his book that ethical aspects are aligned deeply to research and its involved categories. As a productive skill in a second language, English academic

writing focused on Abstracts or preliminary publications must be carefully analyzed and written for avoiding plagiarism of documents published by national and international authorities, by other students and teachers who were helping as advisors, by institutions or academicians, by experts or research centers, conference papers presented in congress, etc.

4.4. EDUCATIONAL IMPACT-

Appropriate guidelines and support for the appropriate drafting of Abstracts or preliminary publications in collaborative and individual work of 5th-level university students at the Universidad Técnica del Norte allowed the creation of a work environment based on the Scaffolding methodology through resources such as an innovative protocol created to support students in specific stages: initial, intermediate and final as part of the implementation of the aforementioned methodology in addition to the use of rubrics. The activities focused on generating a cooperative learning through 3-stage training rubrics where students evaluated their progress gradually during the academic program in execution. The first stage involved recognizing their knowledge according to the subject related to Abstracts academic writing, the second stage focused on evaluating their work done in pairs. In the final stage, the students involved in this project obtained a higher level of preparation than initially was established according to the rubrics and activities presented in pairs and individually in the management of knowledge related to writing preliminary publications related to academic writing.

4.5. CONCLUSIONS.

After analyzing scholarly writing for university students at UTN deeply, it was detected the following problems:

- University Students do not have a specific program in English and even in Spanish for learning or practicing academic writing focused on preliminary publications or abstracts. So, the design and implementation of an academic program helped deeply to university students for writing properly according to the structure given in the academic program.

- Faculties at Universidad Técnica del Norte-UTN do not have a standard format according to Academic disciplines for writing and evaluating abstracts. In this context, the Academic program based on Scaffolding was an useful resource for guiding not only students but teachers at Faculties.
- University students could not write properly abstracts even in Spanish due to the lack of a methodology for supporting them previously to their final research work and also, due to lack of a daily routine for reading academic texts. So, as a solution for enhancing written abstracts in Spanish and English, it was used a group of abstracts compiled at Centro Académico de Idiomas for analyzing. After reading them, students had to recognize visually mistakes in the micro- and macro-structure and after that step, according to the protocol, it was evident the improvement for analyzing and identifying the structure of abstracts.
- University students at UTN do not apply rubrics to write their abstracts academically in their faculties. Consequently, it was analyzed the adequate rubric for applying in this program taking into account if summative rubric or formative rubric was indicated for supporting students according to their progress. After an exhaustive analysis and considering that the program was not for passing an University course, it was appropriated a rubric with criteria not numeric. The selected rubric was Formative for assessing the development and progress according to different criteria such as beginning, developing, progressing and extending.
- 5. Lack of a protocol with instructions for guiding students and even teachers, step by step how to write scholarly Preliminary publications was evident. Scaffolding as a methodology was selected to support students enrolled in 5th level, in the crucial process by which they could improve and show high quality in their productive skill, specifically in writing after some periods using determined materials and working cooperatively from initial level to advance level focused on micro components (language style and grammar) and macro-structure. This Protocol was created specifically for undergraduate students in 3 stages: Initial, intermediate and advance according to their development in this skill of production. This innovative protocol was applied within Scaffolding methodology for improving academic

writing based on Abstracts. Furthermore, this protocol helped to follow guidelines for assessing the process in initial, intermediate and final phase of this project. Lastly, university students who were involved in this program completing a process by which they acquired knowledge about the proper structure according to the academic disciplines and the indicators given individually in descriptive and informative abstracts by which they showed the highest indicator in development and improvement about this productive skill related to academic writing.

4.6 RECOMMENDATIONS.

Based on the previous research done by experts like Reyes H., Andrensen M., Palma J. (2011) about Preliminary publications or Abstracts written by undergraduate students, it is recommendable:

- After uncovering university students did not receive a training previous to present their thesis or final project in which they had to write an abstract or preliminary publication, it was necessary to create and implement an academic program based on Scaffolding methodology. After applying it, it is considered to promote this methodology in the whole faculties for helping a higher number of students and not only students enrolled in 5th English level.
- As academic resources for supporting within Scaffolding methodology, it was designed 3 different rubrics for 3 different phases in which university students needed to evaluate individually and in peers their progress during this project. These rubrics were used as a format for helping progressively to the population involved in this process. So, it is suggested their seamless application for improving preliminary publications written by university students.
- For improving writing, it was detected that students who were attending to this program did not use to read scholarly abstracts in English class so this was a reason for not recognizing complex technical words in their academic disciplines and additionally the structure to be included. In this scope, it is suggested to incorporate scholarly abstracts in the latest English courses, according to the students' majors for allowing being familiar with them.

- Formative rubrics were created and implemented through Scaffolding methodology in specific phases for supporting students progressively during the period by which the program was applied to students detecting their development and improvement in writing and analysis. It is proposed that formative rubrics can be a permanent resource for using in analysis and for improving scholarly writing.
- As a strong resource for supporting students, the creation of a Protocol was indispensable in order to organize in stages the process established through Scaffolding methodology, so in the future experts, teachers, trainers, or professionals selected for being in this academic program will be able to provide flawlessly help. As an extra help for providing support to students it is recommendable to analyze more resources like apps which can offer more technological reinforcement for fortifying the process.

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ANNEXES

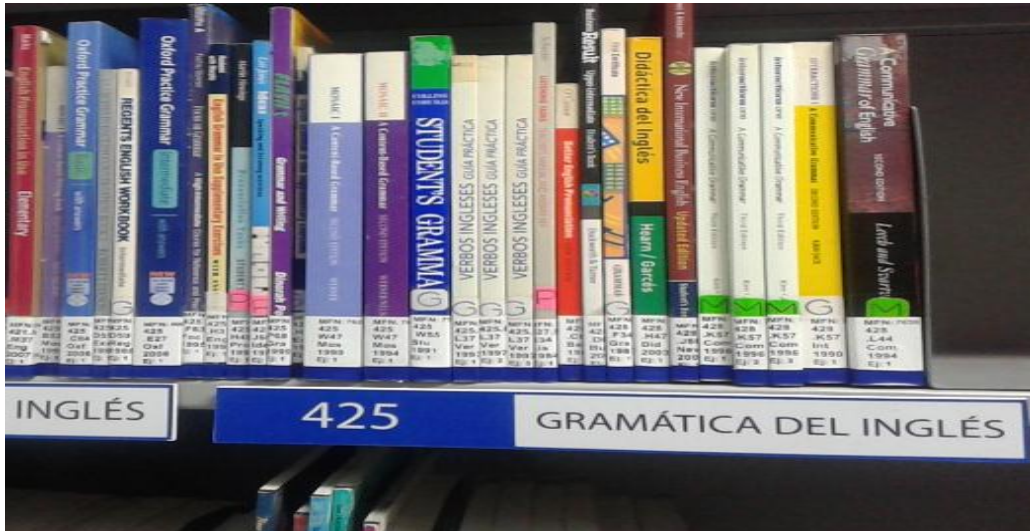


Image 1.- Books available at UTN Library for teaching grammar and English as a Second language. It is noticeable lack of book for teaching how to write academically abstracts or preliminary publications.



Image 2.- Books available at UTN Library for teaching Linguistics and English as a Second language but not for teaching how to write academically abstracts or preliminary publications.

DIAGNOSIS SURVEY

Objetivo: Obtener información sobre el conocimiento acerca de la redacción de publicaciones preliminares en inglés -español.

EDAD: _____ GÉNERO: F ____ M ____

CARRERA DE ESTUDIO: _____

NIVEL DE INGLÉS EN CURSO:

1 2 3 4 5

Niveles culminados

FACULTAD: _____

SEMESTRE QUE CURSA: _____

Correo institucional: _____

Marque con un visto (✓) conforme a su realidad en base a la información requerida:

1. Ha recibido clases en inglés enfocadas en la redacción o escritura (writing) académica relacionada con Abstracts ? Sí No
2. Conoce la estructura académica para redactar abstracts en español ?
Sí No
3. Conoce la estructura académica para redactar Abstracts en inglés?
Sí No
4. Si respondió afirmativamente por favor seleccione la estructura académica para la redacción de Abstracts que Ud. conoce:
RECOMMENDATIONS REFERENCES GRAPHICS
OBJECTIVES METHOD CONCLUSIONS
ABREVIATIONS TITLE RESULTS
5. Indique si la redacción de abstracts tiene un formato universal o único en todas las disciplinas académicas ? Sí No
No tengo conocimiento de ello
6. Seleccione el nombre académico usado por los investigadores expertos en redacción con el cual se conoce a un Abstract:
Análisis preliminar Resultado preliminar
Publicación preliminar No sé
7. Ha redactado antes un Abstract en inglés ? Sí No
8. Ha redactado antes un abstract en español ? Sí No

9. Dispone su Facultad de recursos y/o imparte capacitaciones para redactar abstracts en inglés?

Sí No Desconozco

10. Conoce de algún programa de capacitación que se ofrezca a estudiantes de la UTN que cursan el último nivel de inglés en el Centro Académico de Idiomas (CAI) dirigido a asesorar en el proceso de redacción de abstracts en inglés ?

Sí No Desconozco

11. Considera que se requiere de guía con apoyo profesional en su universidad para redactar un Abstract en inglés antes de culminar su proyecto final de carrera ?

Sí No

12. Estaría ud. Interesado en participar en un programa de capacitación práctica con la respectiva guía profesional para poder redactar un Abstract en español e inglés requerido en el proyecto final previo a obtener su título profesional ?

Sí No
Código: UTN- - - 05/+

Firma _____

Agradecemos su participación voluntaria con los datos otorgados en esta encuesta.

RUBRIC 1 -INITIAL STAGE-BRAINSTORMING					
CRITERIA	STAGE 1-BEGINNER	STAGE 2-DEVELOPING	STAGE 3-PROGRESSING	STAGE 4-ADVANCED	COMMENT
CLASSIFICATION OF ABSTRACTS/DISCIPLINES	Student can poorly recognizes the scope of an abstract or preliminary publication	Student fairly distinguishes Academic disciplines for writing the correct Abstract.	Student occasionally can recognize Academic disciplines of Abstracts.	Student can rightfully recognizes the classification of abstracts according to the disciplines	
LANGUAGE (SPANISH-ENGLISH)	Student hesitates for including appropriated evidence of coherence in the information included in the abstract -	Student rarely associates his/her native language with the information it is required in a second language	Student shows a consistent Transductive reasoning focus on the parameters included in bilingual writing	Student accurately knows how to write an Abstract in bilingual form.	
STYLE OF ABSTRACTS / MICRO COMPONENTS OF ABSTRACTS	Student shows plenty of grammatical mistakes, lack of academic lexis and even redundancy in the content of the preliminary publication.	Student shows occasional errors of spelling, punctuation, capitalization, paragraphing and a few Academic expressions.	Student shows limited errors of spelling, punctuation, capitalization, paragraphing and redundancy	Student properly identifies the grammatical structure included in the abstract based on a specific Academic discipline.	
MACRO-COMPONENTS OF ABSTRACTS	Student does not recognize the proper macro-components of Abstracts	Students shows an overall conception about macro-components of abstracts	Student occasionally recognizes some aspects about macro-components of Abstracts according to the Academic discipline	Student appropriately identifies macro-components of abstracts according to the scope	

Image 3 .- Initial Formative Rubric - Brainstorming (created by López Linda -2017) (Cano, 2016)

RUBRIC 2 -INTERMEDIATE STAGE					
PEER- ASSESSMENT					
CRITERIAS	STAGE 1-BEGINNING	STAGE 2-DEVELOPING	STAGE 3-PROGRESSING	STAGE 4-EXTENDING	COMMENT
FEEDBACK	Students can poorly give information for supporting each other and reinforcing the scope for improving writing based on abstract or preliminary publication	Students are fairly able to distinguish Academic disciplines for writing the correct Abstract and supporting each other.	Students occasionally can support each other with proper information about the style and structure of Abstracts.	Student can rightfully support each other for recognizing the classification of abstracts according to the disciplines	
PEER- COLLABORATION	Student hesitates for participating in the tasks assigned focus on the abstract-preliminary publication.	Student rarely associates his/her native language with the information it is required in a second language	Student shows a consistent Transductive reasoning focus on the parameters included	Student accurately knows how to write an Abstract in bilingual form.	
TIME-MANAGEMENT	Student shows lack of management of time for recognizing microstructure and macrostructure of abstracts easily .	Student shows regular organization of time for selecting errors of spelling, punctuation, capitalization, paragraphing and a few Academic expressions.	Student occasionally is able to manage timing for recognizing some aspects about macro-components of Abstracts according to the Academic discipline	Student appropriately manage timing for analyzing macro-components and style of abstracts according to the scope.	
LEADERSHIP / PERSISTANCE	Student did not keep the persistence for completing his / her assigned tasks according to the protocol designed for improving Academic writing based on abstracts.	Student shows a reduced management about timing for identifying macro and micro components of abstracts	Student shows a permanent attitude toward analyzing and presenting activities related to Abstracts-Style and structure.	Student properly shows their abilities for Academic Writing based on improving Preliminary Publications.	

Image 4 .- Intermediate Formative Rubric – Peer Assessment (created by the López Linda-2017)

RUBRIC 3 -FINAL STAGE					
SELF- ASSESSMENT					
CRITERIAS	STAGE 1-BEGINNING	STAGE 2-DEVELOPING	STAGE 3-PROGRESSING	STAGE 4-EXTENDING	COMMENT
CLASSIFICATION OF ABSTRACTS/ DISCIPLINES	Student can poorly recognizes the scope of an abstract or preliminary publication	Student fairly distinguishes Academic disciplines for writing the correct Abstract.	Student occasionally can recognize Academic disciplines of Abstracts.	Student can rightfully recognizes the classification of abstracts according to the disciplines	
LANGUAGE (SPANISH-ENGLISH)	Student hesitates for including appropriated evidence of coherence in the information	Student rarely associates his/her native language with the information it is required in a second language	Student shows a consistent Transductive reasoning focus on the parameters included in bilingual writing	Student accurately knows how to write an Abstract in bilingual form.	
STYLE OF ABSTRACTS / MICRO COMPONENTS OF ABSTRACTS	Student shows plenty of grammatical mistakes, lack of	Student shows occasional errors of spelling, punctuation,	Student shows limited errors of spelling, punctuation, capitalization,	Student properly identifies the grammatical structure included	
MACRO-COMPONENTS OF ABSTRACTS	Student does not recognize the proper macro-components of Abstracts	Students shows an overall conception about macro-components of abstracts	Student occasionally recognizes some aspects about macro-components of Abstracts according to the Academic	Student appropriately identifies macro-components of abstracts according to the scope	

Image 5.- Final Formative Rubric- Self assessment (created by López Linda -2017)



**PONTIFICIA UNIVERSIDAD CATÓLICA DEL
ECUADOR SEDE IBARRA
PUCESI**

**PROTOCOLO DE ESCRITURA ACADÉMICA BILINGÜE:
PUBLICACIONES PRELIMINARES O ABSTRACTS**

Objetivo

Mejorar la redacción de publicaciones preliminares (español-inglés) de estudiantes universitarios en su último período de estudio previo a obtener su título académico profesional de tercer nivel.

1. BRAINSTORMING (COMPILATION)

- 1.1 WHAT IS AN ABSTRACT ?
 - 1.2 DOES AN ABSTRACT HAVE A SINGLE FORMAT ?
 - 1.3 HOW MANY PARAGRAPHS DOES AN ABSTRACT HAVE ?
 - 1.4 ACCORDING TO THE ACADEMIC DISCIPLINES, HOW MANY TYPES OF ABSTRACTS ARE APPLIED ? WRITE THE PROPER NAMES.
 - 1.5 WHAT IS A PRELIMINARY PUBLICATION?
 - 1.6 DO YOU KNOW WHAT IS THE CORRECT STRUCTURE OF PRELIMINARY PUBLICATIONS? DESCRIBE IT.
 - 1.7 ARE ACRONYMS PART OF THE STRUCTURE OF ABSTRACTS ?
 - 1.8 ARE GRAPHICS AND CITATIONS ELEMENTS FOR BEING INCLUDING IN UNIVERSITY STUDENTS' ABSTRACTS ?
 - 1.9 IS ENGLISH THE LANGUAGE USED FOR PUBLISHING SCIENTIFIC RESEARCH ? WHY?
 - 1.10 IS AN ABSTRACT IN ENGLISH SIMILAR TO AN ABSTRACT IN SPANISH ?
- INITIAL STAGE : FORMATIVE RUBRIC / SELF-REFLECTION


2. OUTLINE

- 2.1 ABSTRACT: PURPOSE
- 2.2 PRELIMINARY PUBLICATIONS AND ABSTRACTS
- 2.3 GENERAL STRUCTURE
- 2.4 TRANSDUCTIVE REASONING: COMMON MISTAKES
- 2.5 ACADEMIC DISCIPLINES
 - 2.5.1 SOCIAL SCIENCES
 - 2.5.2 HUMANITIES
 - 2.5.3 SCIENCES

Image 6.- Protocol for applying phases involved in Scaffolding methodology (created by López Linda-2017)

- 2.7 MACRO-STRUCTURE
 - 2.5.1 ACADEMIC DISCIPLINES
 - INTRODUCTION
- 2.8 MICRO-STRUCTURE
 - 2.6.1 ACADEMIC DISCIPLINES
- 3. ROUGH DRAFT / MODELLING**
 - 3.1 ANALYSIS OF ACADEMIC DISCIPLINES
 - 3.1.1 SOCIAL SCIENCE & HUMANITIES
 - 3.1.2 SCIENCE AND APPLIED SCIENCE
 - 3.1 ANALYSIS OF MACRO-STRUCTURE
 - 3.1.1 ACADEMIC DISCIPLINES: SIMILITUDES AND DIFFERENCES
 - 3.2 ANALYSIS OF MICRO-STRUCTURE
 - 3.2.1 ACADEMIC DISCIPLINES: SIMILITUDES AND DIFFERENCES
- 4. REVISING AND RUBRICS**
 - 4.1 ANALYSIS OF INFORMATIVE ABSTRACTS :
 - ACADEMIC DISCIPLINE, MACRO-STRUCTURE, MICRO-STRUCTURE (COLLABORATIVE WORK).
 - 4.2 ANALYSIS OF DESCRIPTIVE ABSTRACTS:
 - ACADEMIC DISCIPLINE, MACRO-STRUCTURE, MICRO-STRUCTURE (COLLABORATIVE WORK).
 - INTERMEDIATE STAGE: FORMATIVE RUBRIC/ PEER-ASSESSMENT
- 5. FINAL EDITION**
 - 5.1 ANALYSIS OF INFORMATIVE ABSTRACTS : INDIVIDUAL TASK
 - 5.1.1 ACADEMIC DISCIPLINES
 - 5.1.2 MACRO-STRUCTURE
 - 5.1.3 MICRO-STRUCTURE
 - 5.2 ANALYSIS OF DESCRIPTIVE ABSTRACTS: INDIVIDUAL TASK
 - 5.2.1 ACADEMIC DISCIPLINES
 - 5.2.2 MACRO-STRUCTURE
 - 5.2.3 MICRO-STRUCTURE
 - FINAL STAGE: FORMATIVE RUBRIC /SELF- ASSESSMENT

Image 7.- Protocol for applying Scaffolding in some phases (created by López Linda - 2017)



UNIVERSIDAD
DE SALAMANCA
CAMPI DE EXCELENCIA INTERNACIONAL

Reducing student risks in the laboratory Protocol assessment

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TEEM '14
Technological Ecosystems for Enhancing Multiculturality




Image 8 .- Protocol for assessing risks at Laboratory.

BOX 1 | ORIGINAL LABORATORY-SCALE PROTOCOL

Nanoparticles of BaTiO₃ were prepared by our kinetically controlled vapor diffusion protocol, as described previously^{30,31}. The typical procedure is described below.

MATERIALS

- BaTi(OCH₂CH(CH₃)OCH₃)₆, 0.5 M, in a mixture of methoxypropanol/1-butanol (1-BuOH) with a molar ratio of 2:1 (Gelest, cat. no. DBATI50)
- 1-Butanol (1-BuOH; Fisher Scientific, cat. no. A399-500)
- HCl (12.1 M) (EMD Chemicals, cat. no. HX0603P-5)
- Distilled water (MilliQ water, 18 MΩ-cm)

EQUIPMENT

- Falcon multiwell plate (4 × 3; BD Falcon 12 well, cat. no. 351143)
- Airtight plastic (e.g., Tupperware) box
- Glove bag, hooked to argon supply tank
- Syringes and Kimwipes (3)

PROCEDURE

1. Open the plastic box, place the multiwell plate inside it and place it inside a glove bag.
2. Place the precursor, H₂O/HCl solution, 1-BuOH and three syringes inside the glove bag.
3. Fill and purge the glove bag five times with argon gas.
4. Add solution (1 ml of the precursor + 0.2 ml 1-BuOH) to four wells, and 2 ml of H₂O/HCl to two wells. Whenever doping is necessary, dopant (such as La(acac)₃) precursors are mixed together with the alkoxide precursor and placed in appropriate precursor wells.
5. Seal the plastic box and remove it from the glove bag. Place it in a 16 °C cold room until the gelling is complete.
6. Remove the box from the cold room and place it back into the glove bag. Remove all the H₂O/HCl. Seal the plastic box and place the box inside a warm room to age the product at 30 °C for 1–2 d, after which the syneresis will be complete and well-formed pellets can be collected, rinsed with 1-BuOH and dried under vacuum.
7. A white to pale-yellow powder (431 mg) is obtained.

Using a 20-ml vessel (instead of the multiwell plate) inside a plastic box with a 2.6-liter volume capacity, we obtained a maximum of 1.2 g of the product, with a yield >95% as described in reference 31. Above this volume, this protocol yielded amorphous materials.

Image 9 .- Protocol for being applied according to Materials, equipment and specific procedure

SAMPLES OF ABSTRACTS USED DURING THE PROGRAM

RESUMEN.

El presente trabajo de grado se enfoca en el montaje de motores brushless, en una silla de ruedas manual convencional, minimizando el peso a comparación a una silla de ruedas eléctrica comercial. Esta silla de ruedas se desplaza a través del uso de un Joystick (Palanca de mando) y un sistema de control basado en Arduino.

En el desarrollo del prototipo de la silla de ruedas eléctrica se emplearon motores eléctricos de corriente continua (C.C) con un alto índice de eficiencia. Para controlar estos motores se acopló un EM-151B BRUSHLESS DC MOTOR DRIVE, comandado desde un Arduino MEGA, para la alimentación de energía del sistema de potencia y de control, se empleó una batería eléctrica recargable de fosfato de hierro de litio de última generación y amigable con el medio ambiente.

A continuación, se presenta una breve descripción de cada capítulo:

CAPÍTULO I: Se describe los aspectos referentes al planteamiento del problema.

CAPÍTULO II: Contiene conceptos teóricos fundamentales para el desarrollo del tema.

CAPÍTULO III: Describe los métodos útiles para el avance de la investigación.

CAPÍTULO IV: Se desarrolla la propuesta, del diseño y construcción de una silla de ruedas de ruedas eléctrica para discapacitados.

CAPÍTULO V: Conclusiones y Recomendaciones, obteniendo los resultados más representativos del proyecto final.

ANEXOS: Programación en código C, Fotografías del proyecto de tesis y Diagramas

Image 10.- Initial stage. Abstract written by a student who concluded his major in Applied Sciences (Engineering) previous to attend the academic program supported by Scaffolding methodology.

Identifique la macroestructura y microestructura correcta del siguiente Abstract de acuerdo a las rúbricas empleadas en el programa académico para redacción:

RESUMEN

Realizamos una investigación de tipo evaluativa, con el objetivo de elevar el nivel de conocimiento sobre el embarazo en la adolescencia, mediante la aplicación de un programa educativo en adolescentes de la Unidad Educativa "Madre Teresa Bacq". La muestra quedó conformada por 31 adolescentes; a los que se aplicó un cuestionario al iniciar y culminar la investigación, los resultados reflejan que la mayoría de adolescentes tiene la edad de 17 años y el sexo femenino fue mayoritario. Antes y después de aplicar la estrategia de intervención educativa, encontramos que 31 adolescentes tenían un nivel de conocimiento alto sobre la edad óptima para la concepción. Del total de adolescentes, inicialmente 27, tenían conocimientos bajos sobre la anticoncepción y después del desarrollo de la intervención, 14 incrementaron sus conocimientos a un nivel alto. Sobre complicaciones del embarazo en la adolescencia, el nivel de conocimientos inicialmente era bajo, después, 12 adolescentes lo elevaron a un nivel alto y 16 a un nivel medio. Sobre aborto y sus complicaciones en la adolescencia, encontramos que antes de la intervención 20 adolescentes poseían niveles bajos de conocimiento, 6 de ellos conocimientos medios y solo 5 conocimientos altos. Después de aplicada la actividad educativa, un total de 20 estudiantes, el 64,5%, elevaron su conocimiento a un nivel alto, 9 al nivel medio y 2 se mantuvieron en el nivel bajo.

Finalmente nosotros elevamos significativamente el nivel de conocimiento acerca del embarazo en la adolescencia por lo que el Programa Educativo se evaluó como efectivo.

PALABRAS CLAVES: Adolescencia, embarazo en la adolescencia, intervención educativa.

Comentado [MJAM13]: Falta el título.

Comentado [MJAM14]: Resumen informativo.

Comentado [MJAM15]: Este resumen habla en 1^a persona y lo correcto es hablar en 3^{ra} persona y pasado, sería "Se realizó".

Comentado [MJAM16]: Objetivo del resumen y metodología.

Comentado [MJAM17]: Está saltadas las líneas.

Comentado [MJAM18]: Se debe usar el tiempo en pasado, debería ser "reflejaron".

Comentado [MJAM19]: No se debe informar en terceras personas, debería ser "Se encontró".

Comentado [MJAM20]: Resultado del resumen de la investigación.

Comentado [MJAM21]: No se debe informar en 1^a persona, debería ser "Se elevó".

Comentado [MJAM22]: Conclusión del resumen.

Comentado [MJAM23]: Falta redactar las recomendaciones.

Comentado [EAOR24]: Cuenta solamente con 3 palabras claves y lo recomendado es de 6 a 8 palabras.

Image 11.- Abstract analyzed by students for identifying mistakes in the micro and macro structure.

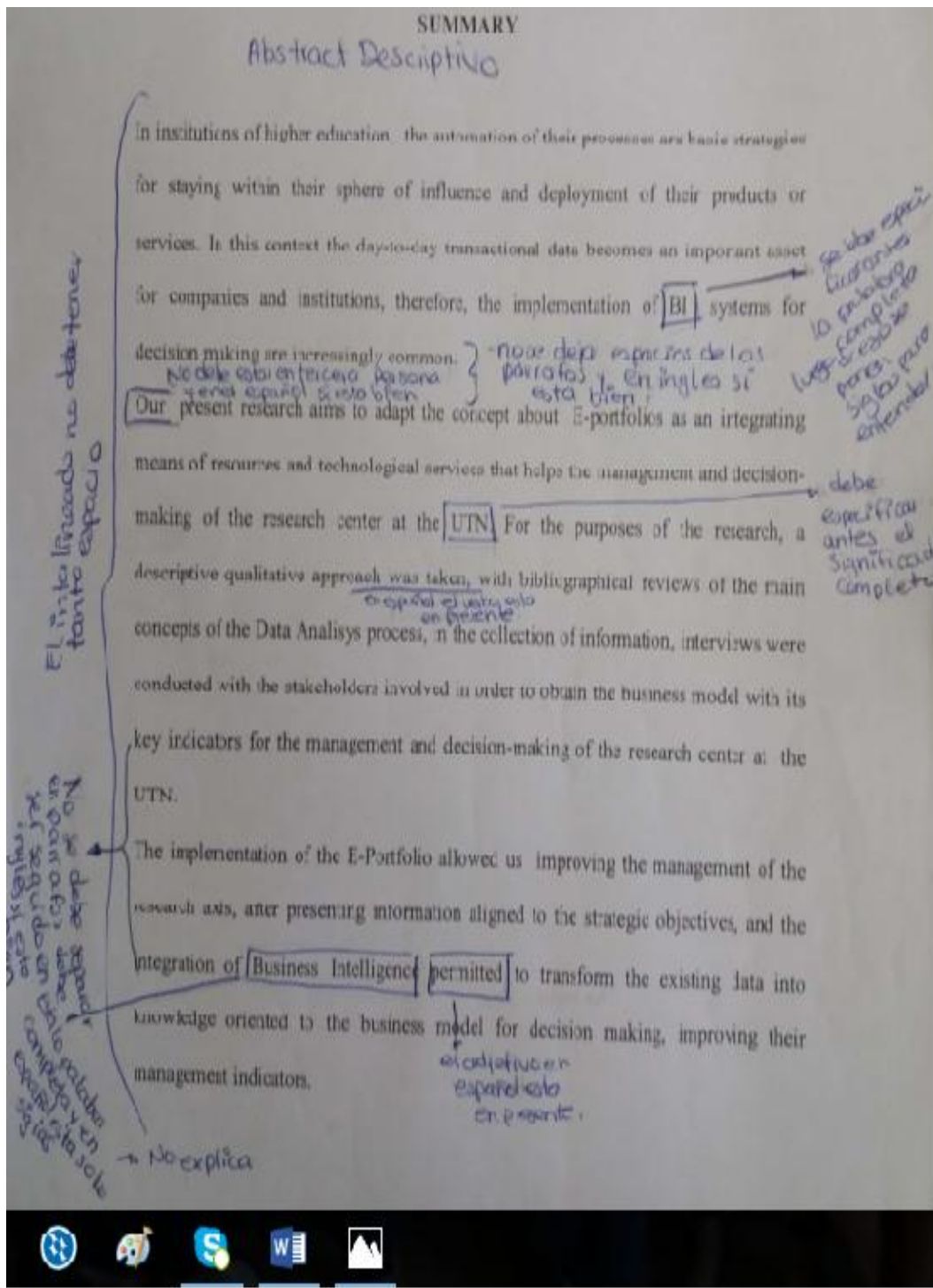


Image 12.- Sample of an Abstracts analyzed by students during the academic program.

After reading next abstract, identify the mistakes in macro and microstructure using the rubrics given in this Academic program for writing Preliminary Publications:

SUMMARY

An evaluative research was carried out for increasing the level of knowledge about adolescent pregnancy, through an educational program applied for a group of adolescents in "Mother Teresa Bacq" Educational Unit. The sample was integrated by 31 adolescents who were evaluated using a questionnaire which was applied before and after finishing this research.

Our results showed that the majority of adolescents were 17 years old and the female sex was the majority. Before and after applying the strategy using educational intervention, we found that 31 adolescents had a high level of knowledge about the optimal age for conception. From the total number of adolescents, initially 27 of them had low knowledge about contraception and after developing the intervention, 14 of them increased their knowledge in a high level. About complications of pregnancy in adolescence, the level of knowledge was initially low, then 12 adolescents had a high level and 16 had a medium level.

About abortion and its complications in adolescence, we found that before the intervention 20 adolescents had low levels of knowledge, 6 of them had an average knowledge and only 5 had high knowledge.

After applying the educational activity, a total of 20 students, 64.5%, increased their knowledge in a high level, 9 of them had an average level and 2 remained at a low level. Lastly, the level of knowledge about pregnancy during adolescence was significantly increased and the Educational Program was evaluated as effective.

KEY WORDS: adolescence, adolescent pregnancy, educational intervention

Comentado [EAOR12]: Falta el título del resumen.

Comentado [EAOR13]: Resumen informativo.

Comentado [AVCF14]: No debe utilizarse la primera persona, sino solo tercera persona, por ello debería ser "were".

Comentado [EAOR15]: Objetivo del resumen y metodología.

Comentado [EAOR16]: Están saltadas las líneas, y debe todo el resumen en un solo párrafo.

Comentado [EAOR17]: No debe utilizarse la primera persona, sino solo tercera persona, por ello debería ser "The results".

Comentado [EAOR18]: Están saltadas las líneas, y debe todo el resumen en un solo párrafo.

Comentado [EAOR19]: Están saltadas las líneas, y debe todo el resumen en un solo párrafo.

Comentado [EAOR20]: Resultado del resumen de la investigación.

Comentado [EAOR21]: Falta las recomendaciones.

Comentado [EAOR22]: Conclusión del resumen.

Comentado [EAOR23]: Cuenta con tan solo 3 palabras claves, y lo normal es de 6 a 8.

Image 13.- Sample of an Abstract checked and analyzed by students for its improvement based on the protocol structured for supporting students aligned to Scaffolding methodology.

En las instituciones educativas de nivel Superior, la automatización de sus procesos son estrategias básicas para la permanencia dentro de su ámbito de influencia y despliegue de sus productos o servicios. En este contexto, la data transaccional del día a día se vuelve un activo importante para las empresas e instituciones, por lo tanto, nosotros identificamos la implementación de BI para la toma de decisiones debido a que son cada vez más comunes. La presente investigación según Gardner (2010) adapta el concepto de E-portafolios como medio integrador de recursos y servicios tecnológicos que ayude a la gestión y la toma de decisiones del eje de investigación de la UTN. Para efectos de la investigación se toma un enfoque cualitativo descriptivo, con revisiones bibliográficas de los principales conceptos del proceso de Data Analysis, en la recolección de información se realizan entrevistas a los stakeholder involucrados con el fin de obtener el modelo de negocio con sus indicadores claves para la gestión y toma de decisiones del eje de investigación de la UTN. La implementación del E-Portafolio permite mejorar la gestión del eje de investigación, presentando información alineada a los objetivos estratégicos, además la integración de BI permite transformar los datos existentes en conocimiento orientado al modelo del negocio para la toma de decisiones, logrando mejorar sus indicadores de gestión.

Palabras Clave: E-Portafolio, BI, DW, Indicadores de gestión de Investigación, UTN.

Image 14.- Sample of an Abstract selected at random for its analysis during the academic program.

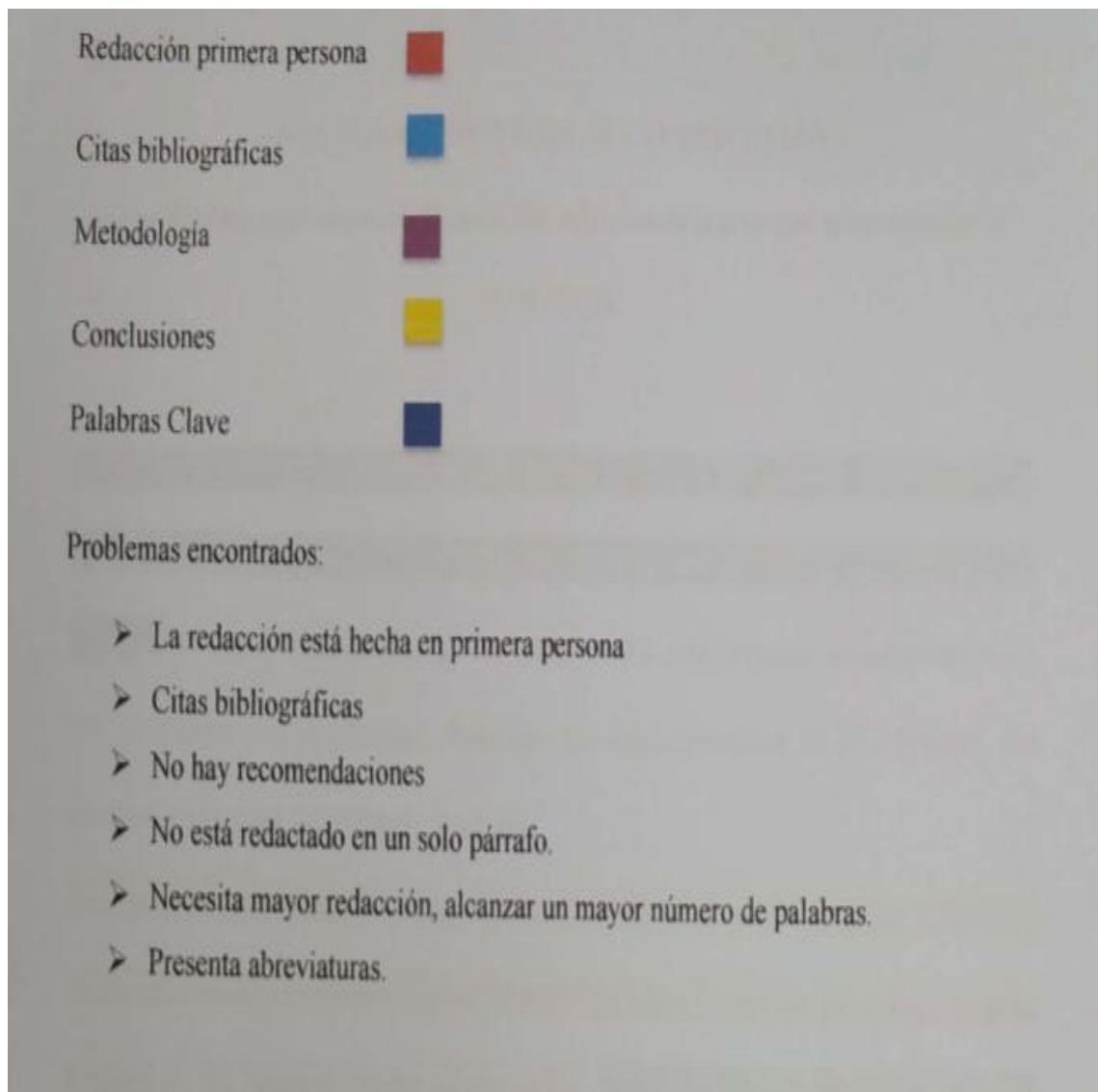


Image 15.- Analysis done by students after checking the sample of an Abstract presented in the image 14.

Realizamos una investigación de tipo evaluativa, con el objetivo de elevar el nivel de conocimiento sobre el embarazo en la adolescencia, mediante la aplicación de un programa educativo en adolescentes de la Unidad Educativa "Madre Teresa Bacq".

La muestra quedó conformada por 31 adolescentes; a los que se aplicó un cuestionario al iniciar y culminar la investigación, los resultados reflejan que la mayoría de adolescentes tiene la edad de 17 años y el sexo femenino fue mayoritario. Antes y después de aplicar la estrategia de intervención educativa, encontramos que 31 adolescentes tenían un nivel de conocimiento alto sobre la edad óptima para la concepción. Del total de adolescentes, inicialmente 27, tenían conocimientos bajos sobre la anticoncepción y después del desarrollo de la intervención, 14 incrementaron sus conocimientos a un nivel alto.

Sobre complicaciones del embarazo en la adolescencia, el nivel de conocimientos inicialmente era bajo, después, 12 adolescentes lo elevaron a un nivel alto y 16 a un nivel medio. Sobre aborto y sus complicaciones en la adolescencia, encontramos que antes de la intervención 20 adolescentes poseían niveles bajos de conocimiento, 6 de ellos conocimientos medios y solo 5 conocimientos altos. Después de aplicar la actividad educativa, un total de 20 estudiantes, el 64,5%, elevaron su conocimiento a un nivel alto, 9 al nivel medio y 2 se mantuvieron en el nivel bajo.

Finalmente nosotros elevamos significativamente el nivel de conocimiento acerca del embarazo en la adolescencia por lo que el Programa Educativo se evaluó como efectivo.

PALABRAS CLAVES: Adolescencia, embarazo en la adolescencia, intervención educativa.

Image 16.- Sample of an abstract written and checked by students in the academic program supported with Scaffolding.

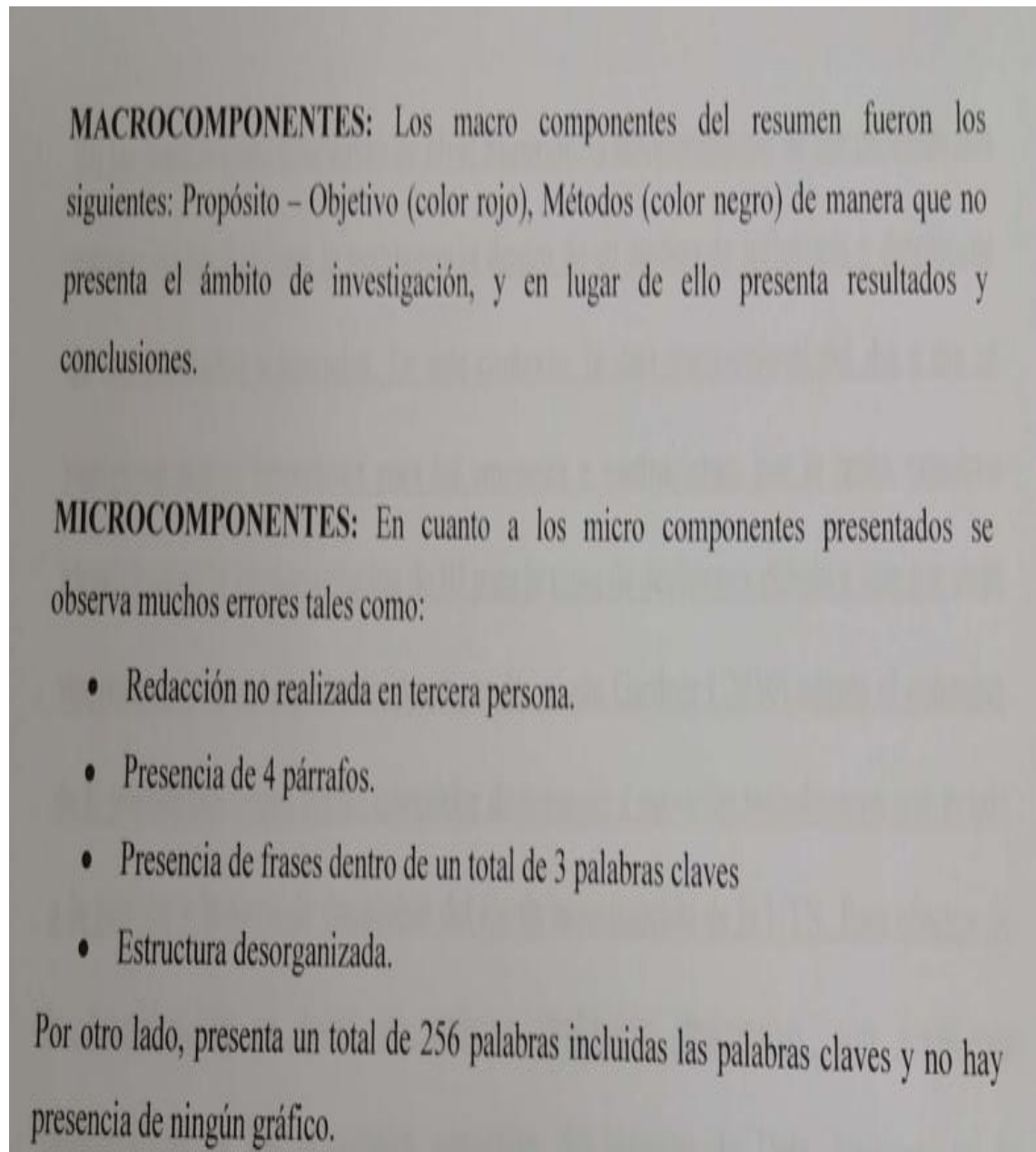


Image 17.- Analysis done by students who presented their results according to the training in which they were participating.

**"DESIGN AND CONSTRUCTION OF AN ELECTRIC WHEELCHAIR
PROTOTYPE, APPLYING BRUSHLESS MOTORS (OUTRUNNER)"**

SUMMARY

The present work of degree was focused on the set up of brushless electric engines in a conventional manual wheelchair reducing weight in contrast to an electric wheelchair commercial. This design is mobilized according to the use of a joystick and a control system based on Arduino software, offering a better mobility solution. **Materials and Methodology.** In the development of the prototype were used brushless DC engines with 79% energetic efficiency, which allows optimizing parameters such as space, weight, noise and vibrations due to the reduced number of mechanical elements that produce friction in this type of devices. In order to control these motors was coupled an EM-151B BRUSHLESS DC driver which was controlled by an Arduino Mega and directed by an omni directional system through industrial joystick modified. For the power supply of the power and control system, a rechargeable, state-of-the-art lithium iron phosphate rechargeable battery of latest generation and environmentally friendly was used. A voice control was added to stop the wheelchair and prevent collisions. **Conclusions and results.** An electric traction system was developed on a conventional manual wheelchair in order to the optimization in the mobility of people with limited physical abilities through the usage of specific commands and voice messages in the system as innovative alternative for its control, inform the user about the direction and stop the movement under critical conditions.

Key words: Prototype, wheelchair, joystick, Arduino, mobility, optimizing, electric traction, voice control.

Image 18.- Final stage. A sample of an abstract written carefully after considering the appropriate structure it is required according to the academic discipline.

ANÁLISIS

La publicación preliminar pertenece a la disciplina académica de Ciencias Aplicadas por lo que es un abstract informativo, con relación a la Macro estructura el texto está redactado de acuerdo a los componentes necesarios para su elaboración, a excepto de las recomendaciones. Con respecto a la Microestructura el resumen cumple con todos los componentes de abstract informativo, es decir, se encuentra redactado de forma correcta lo que permite al lector identificar de forma rápida y precisa el contenido del trabajo.

Image 19.- Final stage and analysis done by students after checking the sample of an abstract shown in the image 18.