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# Context of English Common Core course 2023 at the University of Panama

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## Resumen

El curso Núcleo Común Inglés (NCIN) fue desarrollado como parte de un proyecto para mejorar la calidad de la oferta académica de la Universidad de Panamá considerando los desafíos del siglo XXI. Este estudio aborda la necesidad de actualizar el programa analítico para cumplir con la política de actualización de la universidad y mantenerse al día con los desarrollos tecnológicos y sociales. La metodología de la investigación

implica un diseño cuantitativo, no experimental, utilizando un muestreo de profesores activos del Departamento de Inglés para la recolección de datos a través de una encuesta anónima utilizando Microsoft Forms. Los resultados de la encuesta validan la confiabilidad en las respuestas y las connotaciones positivas. El análisis se centra en la prueba de hipótesis mediante pruebas no paramétricas, lo que lleva a la identificación de dieciséis temas preferidos para ser incluidos en el programa analítico actualizado de NCIN. Los resultados ponen de manifiesto la relevancia de tener en cuenta las capacidades de los estudiantes y las competencias del Marco Común Europeo de Referencia (MCER).

**Palabras clave:** curso universitario, enseñanza, lengua extranjera, planes de estudios, programa.

### **Context of the Common Core Curriculum in English at the University of Panama**

*Elías De León, Corina Rodríguez, Félix Camarena and Carlos Villarreal*

#### **Abstract**

The English Common Core course (NCIN, for its Spanish acronym) was developed as part of a project to enhance the quality of the University Panama's academic offerings considering the challenges of the 21<sup>st</sup> century. This study addresses the need to update the analytical program to fulfill the university updating policy and to keep pace with technological and social developments. The research methodology involves a quantitative, non-experimental design utilizing a purposeful sampling of active English Department professors for data collection through an anonymous survey using Microsoft Forms. The survey results validate reliability and positive connotations in the responses. The analysis focuses on hypothesis testing using non-parametric tests, identifying sixteen preferred topics to be included in the updated NCIN analytical program. The findings highlight the relevance of considering student capabilities and the Common European Framework of Reference (CEFR) competencies.

**Keywords:** common core, curriculum, foreign language, instruction, courses.

#### **Introduction**

The University of Panama (UP) is the first university and regent of the third level of education within the Republic of Panama; it is committed to maintaining a permanent watch on global trends and responding to the educational needs of the Panamanian population. The Panamanian Government ratified by law, Law No. 42 of August 5, 2002, and Law No.

2 of January 14, 2023, the importance of the comprehensiveness of the formation of citizens by decreeing the teaching of cultural subjects at all educational levels nationwide (Gaceta Oficial, 2002; Gaceta Oficial, 2003).

The UP started its Project and Policy of Academic Curricular Transformation (UP, 2004) to ensure the comprehensive improvement of the academic offer quality, assessing the scopes and methodological alignments established in the University Statute towards the new challenges of the 21<sup>st</sup> century (UP, 2004).

*According to the University of Panama Statute (2008), the Art. 296 establishes a Common Core for all the offered careers at the university. At the same time, the Educational Model (EM) (UP, 2008) of the UP sets the bar for professional formation, establishing the distinction between the two areas of higher education within any given career within the university: Professional Formation (PF) and General Formation (GF).*

The formation areas differ on the surface and weighing but not in their equivalent structure. For once, the *professional formation area*, according to the EM (UP, 2008), develops knowledge, abilities, skills, and attitudes required for the particular field of study and career. Additionally, this area delves into two subsets—*support courses* and *core courses*. Both subsets comprise a minimum of 70% of the total academic credits. In comparison, the *general formation area* develops two subsets: *cultural* and *propaedeutic courses*. Together, the two types of subjects aim to develop soft skills and consciousness by acquiring cultural and moral values, civic knowledge, and scientific abilities. The general formation area will not allocate more than 30% of the career credits. The comprehensive development of the professional profiles of every career is rooted in the wary balance between the general and professional areas of knowledge.

The Common Core Courses within the GF area include the English Common Core course (NCIN, for its Spanish acronym). Despite multiple hypotheses on how the term Common Core got to replace the former *General Studies*, otherwise referred to as the *Common Trunk* at UP, there is one speculative answer involving the *21st-century skills* (Hawkins, 1996), *US No Child Left Behind Act* (NCLB) (2002), along with the namesake, *Common Core State Standards Initiative* (2010). Regardless of the hypotheses in the origin of the term—Common Core—varying from different sources and administrations, the term matches the kernel of the intended purpose, the comprehensive formation of future professionals.

Based on a diversity of national and international opinions related to the future trends of education, the UP, through its Humanities and Social Sciences Council, meeting in March 2012, commanded the then

Humanities Vice-Dean, Carlos Gasnell M.A., to oversee a committee in order to establish the proposal of courses (UP, 2012). In April of that year, the committee presented the first draft of the proposals to the Council for its review and discussion. Finally, in October 2012, the list of possible Optative Courses to be considered part of the Common Core was approved, as seen in Table 1 (UP, 2012).

**TABLE 1**

*Optative Courses, in addition to the Common Core*

<b>COLLEGES</b>	<b>PROPOSALS</b>
PUBLIC ADMINISTRATION	<ol style="list-style-type: none"> <li>1. Gender-Based Violence and Development</li> <li>2. Protocol and Etiquette</li> <li>3. Administration of Organizations</li> <li>4. Management of Public Organizations</li> <li>5. Human Security and Citizen Security</li> </ol>
FINE ARTS	<ol style="list-style-type: none"> <li>1. Theatre for Professional Assertiveness</li> <li>2. Dance Workshops</li> </ol>
EDUCATIONAL SCIENCES	<ol style="list-style-type: none"> <li>1. Education for Economic, Social, and Cultural Development</li> <li>2. Education from Professional Practice</li> </ol>
SOCIAL COMMUNICATION	<ol style="list-style-type: none"> <li>1. Management of Public Opinion</li> <li>2. Intercultural Communication</li> </ol>
LAW AND POLITICAL SCIENCES	<ol style="list-style-type: none"> <li>1. Legal Context of Human Rights</li> </ol>
ECONOMY	<ol style="list-style-type: none"> <li>1. Analysis of the Economic Environment</li> <li>2. Economic Evaluation of Projects</li> <li>3. National Economic Problems</li> <li>4. Financial Fundamentals</li> <li>5. Economic and Social Statistics</li> </ol>
HUMANITIES	<ol style="list-style-type: none"> <li>1. Approaches and Current Challenges of the Social Sciences</li> <li>2. Research Seminar (2)</li> <li>3. Bibliographic Research Seminar (1)</li> <li>4. Basic Physical Education (A)</li> <li>5. Basic Physical Education (B)</li> </ol>

It is worth noting that the equivalences with the then-available courses were a provisional measure until the Dimensions —General and Particular— were established. Before the end of 2012, the UP EM came to fruition, having the first list of courses with their subject abbreviations, numbers, and course codes, as shown in Table 2 (UP, 2012).

**TABLE 2**

*Common Core subjects without Optative Courses*

<b>Subject</b>	<b>Abbreviation</b>	<b>Number</b>	<b>Course Code</b>
Language and Communication in Spanish	NCES	0001	22472
History of Panama in the Global World	NCHI	0002	22473
Geography of Panama	NCGE	0003	22474
Language and Communication in English	NCIN	0004	22475
Computing and Learning Networks	NCIF	0005	22476
*Society, Environment and Development	NCSM	0006	22477
Theory of science	NCFI	0007	22478
*Research Methodology	NCMI	0013	22484
**Scientific and Technological Innovation	NCIC	0010	22481
Mathematics (for Health Sciences)	NCMA	0015	22486
Mathematics (for the rest of the careers)	NCMA	0011	22482
Entrepreneurship	NCAE	0012	22483
Organization Management	NCAE	0014	22485
Budget	NCAP	0016	22487
***Introduction to Health Sciences	NCCS	0023	22494
Psychology Applied to Health Sciences	NCPS	0024	22495
Molecular and cellular biology	NCBI	0025	22498
Attention to diversity	NCED	0019	22490

Appreciation of the arts	NCBA	0020	22491
Comprehensive communication	NCCO	0021	22492
The State of the Law	NCDE		
Social reality of Panama	NCSO		
Ethics and Values in the XXI Century	NCFI		

\*All colleges will offer it. \*\* The Colleges of Natural Sciences, Exact Sciences and Technology, Informatics, Electronics, and Communication will offer it. \*\*\* It will be offered by all the colleges of the Health Sciences Council. Source: Acad. C. N°13-12.

The Academic Council (UP, 2012) ratifies the compulsory five Common Core courses from the General Dimension, starting with technician careers. All technicians continuing with the bachelor's degrees can complete the remaining *General Dimension* and the *Particular Dimension* according to the degree, as explained in Table 3.

**TABLE 3**

*Educational Dimensions*

<b>General Dimension</b>
* Geography of Panama
* Language and Communication in Spanish
* Society Environment and Development
* History of Panama in the Global World
* Language and Communication in English
Computer Science and Learning Networks
Theory of Science
<b>Particular Dimension</b>
Research Methodology (for Natural, Exact, and Technological Sciences)
Research Methodology (for Humanities and Social Sciences)

Research Methodology (for Health Sciences)
Mathematics (for Natural Sciences, Exact Sciences and Technology)
Mathematics (for Humanities and Social Sciences)
Mathematics (for Health Sciences)
Molecular and Cellular Biology
Scientific and Technological Innovation
Attention to Diversity
Entrepreneurship
Organization Management
Psychology Applied to Health Sciences
Introduction to Health Sciences
Integral Communication
Arts Appreciation
Budget
The State of the Law
Social reality of Panama
Ethics and Values in the XXI Century

\*Compulsory Common Core courses. Source: Acad. C. N°12-13.

As the Common Core was established, the English Common Core course (NCIN, for its Spanish acronym) became one of the five compulsory courses across all the UP careers. The NCIN, akin to all analytic programs, requires a micro-curricular update every six years, complying with Art. 104 within CONEAUPA requirements (Ministerio de Educación, 2018). Considering the approved NCIN analytical programs date back to 2012 and 2018, the year 2023 represents the program is due for an update, and it is mandatory to assess the hits and misses of the previous programs, along with how to improve a core element to the professional formation where the UP has a presence.

The NCIN analytical program is relevant to the formation of professionals at the UP as it provides the basis for the second language learning mandated by Panamanian Law (Gaceta Oficial, 2003), along with the necessary topics

to be developed in order to accomplish the basic language competences corresponding to an A2 level of English proficiency from the CEFR (Council of Europe, 2020) and guaranteeing the essential knowledge to take and pass the English Proficiency Graduation Exam (UP, 2006).

An updated NCIN analytical program keeps the university's General Dimension plans on par with the current and soon-to-come technological and social developments. For students, the NCIN represents a renewed opportunity to recourse the English language knowledge acquired from previous educational levels. In the same regard, for current and soon-to-be professionals, the NCIN program represents an outlook on the ESP reading material, trade content, and subjective ideals for their interests. The NCIN analytical program requires a tangible update according to the Panamanian and world reality for several purposes. Thus, this project aims to develop an English Common Core program (NCIN 0004) according to the needs of the educational community of the University of Panama through the compilation of faculty inputs (mainly NCIN professors) and requests on topic suggestions applicable to the analytical program NCIN 0004. The final output is the generated programmatic content for English Common Core, mixing the realia of ESP in the UP with the basic skills necessary to develop A2 competencies (listening, speaking, reading, and writing), which the current research provides the basis for.

### **Methodology**

The project encompassed a quantitative design, considered *non-experimental*, because of the non-manipulation of the independent variable that Hernández-Sampieri y Mendoza (2018) mentioned, provided that it is a single group representing a transectional application for a case study (Nimehchisalem, 2018).

The units of analysis for this study were represented by a purpose sampling comprising the entirety of the active professors' population at the English Department from the Campus Octavio Mendez Pereira during 2023 (throughout both semesters that year). For the current program's evaluation and update project, a purposely developed anonymous survey was used to collect data among the English Department professors at the UP Campus. It is worth noting that the survey did not include ethnic or personal information beyond the statistical non-binding items. The data collection instrument was available using a viable internet connection and a connected device capable of accessing Microsoft Forms© through the following link:

<https://forms.microsoft.com/r/shUuOzaWJV>

or the QR code,

## FIGURE 1

*QR code for the survey*



Source: Microsoft Forms set by the authors.

The form includes an *informed consent* in the first section (Part I) as conditional to proceed to the questionnaire (Part II) or end the survey (Part IV). The respondents agree upon:

*The current anonymous survey is applied to the teaching staff of the English Department at the Octavio Méndez Pereira Campus during the year 2023. The survey is not mandatory, does not have economic remuneration, nor will it affect their evaluations in any way. The faculty's support is requested to select valuable and relevant content for the development of an analytical program NCIN 0004 consistent with the national and global reality.*

*The information collected will be handled with the strictest confidentiality, using only quantifiable data and general information that does not link the respondents to the results. At the end of the research, it is intended to present an analytical program for NCIN 0004 in accordance with the data obtained from this research. And, if required by the institution, conduct conferences and articles presenting the analytical program and study results.*

*If you have questions regarding the topics proposed in the survey, please contact Professor Elías De León (Head researcher and English Professor) to the phone number (+507) 6837-5157 or the email: elias.deleon@up.ac.pa*

Once the respondents agreed to proceed, there was a new section (Part II) where they answered twenty items split equally between two questions. Each item consisted of words or simple phrases along with their grade of affinity using the five-point Likert scale from Table 4.

**TABLE 4**

*Likert scale for SEPS*

Point Scale	Analytical value	Connotation
Extremely important	5	Positive
Somewhat important	4	
Indifferent	3	Neutral
Somewhat not important	2	Negative
Extremely not important	1	

**NOTE. THE FOUR-POINT LIKERT SCALE LIMITS THE INDIFFERENT/NEUTRAL RESPONSES, LEANING TOWARDS THE POSITIVE OR NEGATIVE CONNOTATION. SOURCE: THE AUTHOR.**

The items posed in the data collection instrument in the second section (Part II) appeared in the order shown in Table 5.

**TABLE 5**

*Item distribution*

1. Landmarks	2. Family
3. Shopping	4. Trades
5. Routines and mundane tasks	6. Surroundings
7. Autobiography	8. Physical appearance
9. Experiences	10. Entertaining
11. At the restaurant	12. At the mall
13. At the hospital	14. News
15. Texting and Abbreviations	16. Interviews
17. Questions and Answers	18. Maps
19. Recipes	20. Health

Note: All items show individual Likert scales. Source: Authors.

There was one additional item considered an open-ended question (*Is there any additional topic you would like to suggest? Please share the topics and reasons.*) for additional topics the respondents may consider relevant and not included in the previous poll.

The next part (Part III) represented non-binding personal information, including the items from Table 6.

**TABLE 6**

*Non-binding personal information*

<b>Question</b>	<b>Item</b>
Category	Part-time
	Full-time
Experience	1 to 10 years
	11 to 20 years
	21 years or more
Shift	Morning
	Afternoon
	Night
Sex	Female
	Male

Source: Authors.

The last section (Part IV) included a simple farewell statement: *Thanks for your response*, concluding the survey.

**Results**

By the closure of the data collection instrument (survey), twenty-two (22) study subjects completed answers, as shown in Table 7.

**TABLE 7**

*Case Processing*

		<b>N</b>	<b>%</b>
Cases	Valid	22	100.0
	Excluded <sup>a</sup>	0	.0
	Total	22	100.0
<i>a. Deletion based on all variables in the procedure: None were found.</i>			

The reliability analysis reflected a high-level average inter-item consistency, as shown in Table 8.

**TABLE 8**

*Reliability Statistics*

<b>Cronbach's Alpha</b>	<b>N of Items</b>
.952	20

To reach the previous conclusion, it is necessary to understand that the researchers used a single application data collection instrument within a single group of subjects. Thus, it is possible to discard parallel forms or test-retest alternatives. Even the inter-rater reliability was unfounded, as the researchers, despite tallying a plural number, were tied to the low-n subjects within the group (n=22). The single possibility for reliability in the current study befalls on the internal consistency method, which measures the inter-item correlation within the data collection instrument.

To ensure validity, it is necessary to 'test the test' through its internal consistency to ensure the test focuses on the examination purposes. As Tavakol and Dennick (2011) mentioned, internal consistency means how well all test items measure the same idea or construct. Simply put, reliability means how well a test matches up with itself.

At this point, it is worth noting that a single target group of subjects did not present skewness within the one-dimensionality of the test, as all subjects share common traits. Hereafter, there were no excluded elements for unbalanced defaulting. Consequently, it is safe to adduce the prescriptions on the subjects' homogeneity and uniformity of item

quality. Thus, it is possible to release the need for other tests (omega, glb coefficient tests, among others) as no apparent skewness arise, despite the low-n in samples. For that reason, the alpha coefficient suffices to measure validity on the grounds of internal consistency.

The standard alpha coefficient measure befalls on the Cronbach's alpha, which formula is:

$$\alpha = (k / (k-1)) * (1 - (\sum Si^2 / ST^2))$$

Where:

- $\alpha$  is Cronbach's alpha
- $k$  is the number of items in the scale
- $\sum Si^2$  is the sum of the variances of each item
- $ST^2$  is the variance of the total scores

The calculation involves comparing the variance of individual item scores with the variance of the total scores for each observation—the resulting value series from 0 to 1, with higher values indicating greater internal consistency. In the case of the applied data collection instrument, the overall score of the metrics is considered to have a high internal consistency (Cronbach Alpha >.71). Nonetheless, internal consistency is not always a direct measure of reliability. In the words of Viladric et al. (2017), the actual variance is contingent upon not only the questionnaire's characteristics but also the construct's variability. Therefore, as confirmation, the test was designed to validate the answers using a dichotomic split (a two-halves test).

In other words, the data collection instrument included twenty core items—the content items designed for the analysis—divided into two blocks of ten items each, where all items were synonymic expressions with equal values, with the second half (last ten items) recapping the first half (foremost ten items). Hence, the dichotomy applies to the inter-item and cross-item reliability tests as there is low variability in the item content, as shown in Table 9.

**TABLE 9**  
*Reliability Statistics*

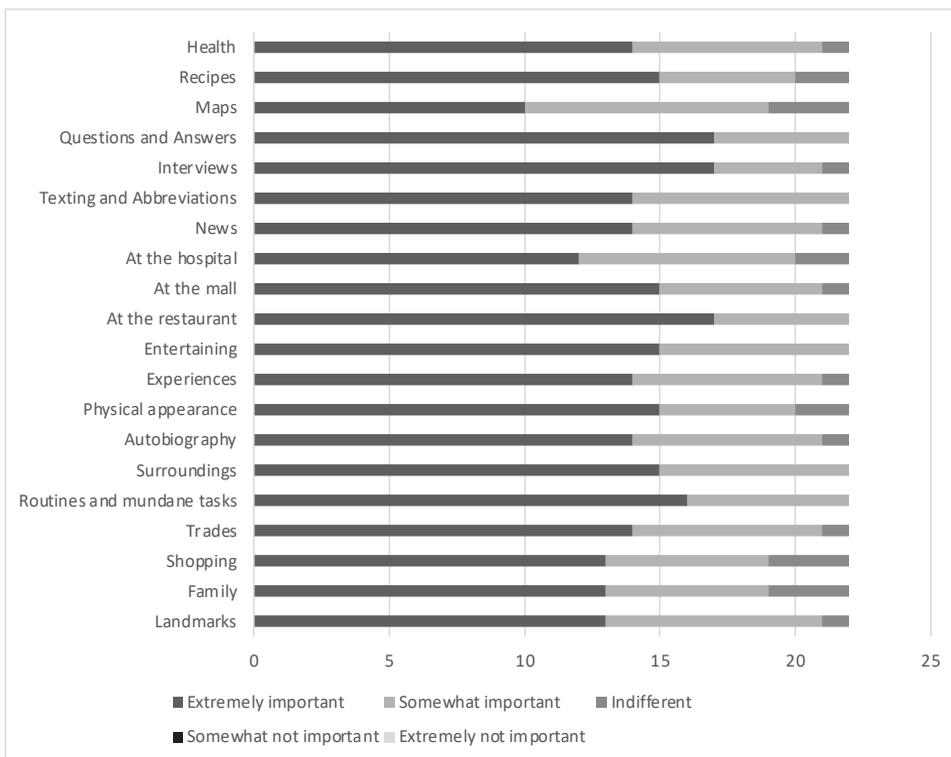
Cronbach's Alpha	Part 1	Value	.934
		N of Items	10 <sup>a</sup>
	Part 2	Value	.896
		N of Items	10 <sup>b</sup>
	Total N of Items		20
Correlation Between Forms			.831
Spearman-Brown Coefficient	Equal Length		.908
	Unequal Length		.908
Guttman Split-Half Coefficient			.904
<p>Note: a. The items are: <i>Location of Places of Interest, Family, Shopping, Professions, Simple &amp; Everyday Tasks, Your Surroundings, Autobiography, Physical Appearance, Experiences, Entertainment.</i></p>			
<p>b. The items are: <i>In the restaurant, In the mall, In the hospital, News, Text message &amp; Abbreviations, Interviews, Q&amp;A, Maps, Recipes, Health.</i></p>			

For the ease of justifying the statistical analyses, it is safer to develop a step-by-step guide on how the statistical analyses were made.

The responses' frequency distributions show no directly related negative connotation, as shown in Figure 2.

## FIGURE 2

*Frequency distributions for NCIN topic preferences*



Note 1. Absolute numbers are based on twenty-two (22) responses to the data collection instrument. Source: Author.

From the individual items, it is possible to discard any absolute negative (extremely not important) as there are zero (0) iterations; from the remaining elements, it is possible to use a graphical representation for each item. The results show a pervasive positive connotation in all items. Nonetheless, it is worth noting the level of indifference within the test results; notwithstanding, they do not diminish the prevalent positive outcomes.

To reconcile with the statistical guide, the first step would be to start leveraging the Likert scale given numeric value—as previously mentioned in Table 4, though now, placing the ordinal levels (5-1), as it appears in Table 10.

**TABLE 10**

*Responses reflecting ordinal values*

	<b>R E S P U</b>								
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>Landmarks</b>	4	4	3	4	5	4	5	5	5
<b>Family</b>	4	3	3	5	5	4	5	5	5
<b>Shopping</b>	4	3	5	5	5	4	4	5	5
<b>Trades</b>	4	4	5	4	5	4	5	5	5
<b>Routines and mundane tasks</b>	4	4	5	5	5	4	5	5	5
<b>Surroundings</b>	4	4	5	5	5	4	5	5	5
<b>Autobiography</b>	4	3	5	4	5	4	5	5	5
<b>Physical appearance</b>	4	3	3	5	5	4	5	5	5
<b>Experiences</b>	4	3	5	4	5	4	5	5	5
<b>Entertaining</b>	4	5	5	4	5	4	5	5	5
<b>At the restaurant</b>	4	5	5	5	5	4	5	5	5
<b>At the mall</b>	4	3	5	4	5	4	5	5	5
<b>At the hospital</b>	4	3	5	4	5	4	4	5	5
<b>News</b>	4	3	5	5	5	4	4	5	5
<b>Texting and Abbreviations</b>	4	5	5	4	5	4	5	5	5
<b>Interviews</b>	4	5	5	5	5	4	5	5	5
<b>Questions and Answers</b>	4	5	5	5	5	4	5	5	5
<b>Maps</b>	4	4	5	4	5	4	4	5	5
<b>Recipes</b>	4	3	5	5	5	4	5	5	5
<b>Health</b>	4	3	5	4	5	4	4	5	5

Once the values are established, it is possible to obtain the per-value mean, and the standard deviation must be established for an overview of the *measures of dispersion* analysis. The mean is nothing more than the average of the responses (cumulative sum between the total number of values) following the formula:

<b>ESTAS</b>												
<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>
5	4	5	5	5	5	5	5	4	4	4	5	5
5	4	5	5	5	5	3	5	4	4	4	5	5
3	4	5	5	5	5	5	5	4	4	3	5	5
3	4	5	5	5	5	5	5	4	4	5	5	5
5	4	5	5	5	5	5	5	4	4	5	5	5
5	4	5	5	5	5	5	5	4	4	4	5	5
5	4	5	5	5	5	5	5	4	4	4	5	5
5	4	5	5	5	5	5	5	4	4	5	5	5
5	4	5	5	5	5	5	5	4	4	4	5	5
5	4	5	5	5	5	5	5	4	4	4	5	5
5	4	5	4	5	5	5	5	5	4	5	5	5
5	4	5	5	5	5	5	5	5	4	4	5	5
3	4	5	4	5	5	5	5	5	4	4	5	5
5	4	5	4	5	5	5	5	5	4	4	5	5
5	4	5	4	5	5	5	5	4	4	4	5	5
3	4	5	5	5	5	5	5	5	4	5	5	5
5	4	5	5	5	5	5	5	4	4	5	5	5
3	4	3	4	5	5	5	5	3	4	4	5	5
5	4	3	4	5	5	5	5	5	4	5	5	5
5	4	5	5	5	5	5	5	4	4	5	5	5

Mean = (sum of responses/number of responses)

For example, if we take the first item, *Landmarks*, and sum its ordinal values.

$$4+4+3+4+5+4+5+5+5+5+4+5+5+5+5+5+5+4+4+4+5+5 = 100$$

The total, 100 for the current case, is then divided among the number of responses, n=22.

$$100/22=4.54545454$$

Applying the same procedure to all items makes it possible to show the results from Table 12.

**TABLE 11**

*Item and corresponding mean values*

<b>ITEM</b>	<b>MEAN</b>
<i>Landmarks</i>	4.545454545
<i>Family</i>	4.454545455
<i>Shopping</i>	4.454545455
<i>Trades</i>	4.590909091
<i>Routines and mundane tasks</i>	4.727272727
<i>Surroundings</i>	4.681818182
<i>Autobiography</i>	4.590909091
<i>Physical appearance</i>	4.590909091
<i>Experiences</i>	4.590909091
<i>Entertaining</i>	4.681818182
<i>At the restaurant</i>	4.772727273
<i>At the mall</i>	4.636363636
<i>At the hospital</i>	4.454545455
<i>News</i>	4.590909091
<i>Texting and Abbreviations</i>	4.636363636
<i>Interviews</i>	4.727272727
<i>Questions and Answers</i>	4.772727273
<i>Maps</i>	4.318181818
<i>Recipes</i>	4.590909091
<i>Health</i>	4.590909091

Source: Authors.

Despite recurring decimals, reducing the decimal extension without greatly altering upcoming results is possible. Once the mean is obtained, it is possible to calculate the standard deviation (Std. Dev.) using the formula:

$$\text{Std. Dev.} = \sqrt{(\Sigma(x - \bar{x})^2 / (n-1))}$$

Where:

- **s** is the sample standard deviation
- $\Sigma$  signifies the sum of
- **x** represents each individual data point in the sample
- $\bar{x}$  (x-bar) denotes the sample mean
- **n** is the number of data points in the sample

Applying the previous formula to the first item, *Landmarks*, it is possible to subtract the mean from the individual response. In the current item, the first response (4), the deviation is:

$$4 - 4.545454545 = -0.545454545$$

Then, we must eliminate the negative value and square it.

$$(-0.5)^2 = 0.297520660661157$$

After that, it is possible to calculate the *variance*, which is the division of the sum of squared deviations by the number of responses minus 1 (n-1), which is 21 in this case, as it refers to a sample population—for a total population, the value would be n=n. The n-1 is used for sampled results, known as the Bessel's correction.

Then, we must add all values in the third column. Only then it is possible to sum the squared deviations. Moreover, we can get the square root of the variances; the results are shown in Table 12.

**TABLE 12***Measures of Dispersion: The Standard Deviation*

	<b>Standard Deviation</b>	<b>No. of responses</b>
<i>Landmarks</i>	.596	22
<i>Family</i>	.739	22
<i>Shopping</i>	.739	22
<i>Trades</i>	.590	22
<i>Routines and mundane tasks</i>	.456	22
<i>Surroundings</i>	.477	22
<i>Autobiography</i>	.590	22
<i>Physical appearance</i>	.666	22
<i>Experiences</i>	.590	22
<i>Entertaining</i>	.477	22
<i>At the restaurant</i>	.429	22
<i>At the mall</i>	.581	22
<i>At the hospital</i>	.671	22
<i>News</i>	.590	22
<i>Texting and Abbreviations</i>	.492	22
<i>Interviews</i>	.550	22
<i>Questions and Answers</i>	.429	22
<i>Maps</i>	.716	22
<i>Recipes</i>	.666	22
<i>Health</i>	.590	22

Source: Authors.

Concerning the types of analysis, the application of parametric tests was initially considered. However, the assumptions about the evenness of the data distribution may not provide reliable results if those assumptions are violated, rolling out the parametric analysis. Therefore, it was safe to assume that the use of a non-parametric test is more suitable, provided the uneven nature of the data. The argument is rooted in the data itself, which does not follow a specific distribution, despite being the typical case with Likert-scale data. With the number of respondents ( $n=22$ ), it is not wise to assume that all respondents will share the same conceptions of importance for the topics, nor a collective background with similar levels of students, thus making the group a small but highly distributed sample despite being all high-academic level individuals—university professors.

Regarding the statistical analysis, it might be risky to disassociate the descriptive statistics from the inferential statistics, though, as a complement to each other rather than for absolute results. For this purpose, during the analysis and conclusions, we refer to the measures of dispersion and central tendency and the frequency distributions as

part of the descriptive statistics insights. While the inferential statistics bequeath the Chi-square and Binomial analyses, they can be used to examine the relationship between categorical variables, such as professor experience level and preference for specific topics. All these analyses aided in determining if there are statistically significant associations between these variables.

It would be possible to apply a Kruskal-Wallis Test, as it is a non-parametric alternative to ANOVA. Nonetheless, this test could be used to compare the distribution of Likert scale responses across different groups of professors (e.g., full-time vs. part-time, different experience levels). The test results would reveal if there are significant differences in preferences between these groups. Nevertheless, the results might not be as reliable as other analyses because the number of responses was of a low-n value.

Additional analyses could have been performed, but the results were meant to be applied along the CEFR competencies. The results from the current research are just introductory material for the analytical program (otherwise known as *syllabus*) and are not expected to be definitive conclusions within a finalized product. Some analyses intentionally deprecated were the factor analysis and cluster analysis. The factor analysis could have been used to identify underlying factors or dimensions that explain the English professors' preferences for different topics. This situation could have revealed patterns and relationships between the topics that might not be apparent from looking at individual responses. As well as the cluster analysis, in which is possible to group professors with similar preferences into clusters, providing insights into different types of approaches to the NCIN syllabus design. But, some of these tests may require larger samples for reliable results.

Descriptive statistics would be sufficient because the goal was to describe the data and understand the professors' overall preferences. Even so, the inferential statistics provide more robust acumens to the “naked eye” results.

The analysis uses non-parametric-statistical-tests due to the unevenness of the target population-despite all being university professors. The analysis is applied with the less plausible result from the single application (hence, one-sample). Individual results for statistical analyses are contained in Table 13.

**TABLE 13**

*Hypothesis Test Results*

	<b>Null Hypothesis</b>
1	<i>Landmarks</i> occur with equal probabilities.
2	<i>Family</i> occurs with equal probabilities.
3	<i>Shopping</i> occurs with equal probabilities.
4	<i>Trades</i> occur with equal probabilities.
5	<i>Routines and mundane tasks</i> = 4 and 5 occur with probabilities .500 and .500.
6	<i>Surroundings</i> = 4 and 5 occur with probabilities .500 and .500.
7	<i>Autobiography</i> occurs with equal probabilities.
8	<i>Physical appearance</i> occurs with equal probabilities.
9	<i>Experiences</i> occur with equal probabilities.
10	<i>Entertaining</i> = 4 and 5 occur with probabilities .500 and .500.
11	<i>At the restaurant</i> = 4 and 5 occur with probabilities .500 and .500.
12	<i>At the mall</i> occurs with equal probabilities.
13	<i>At the hospital</i> occurs with equal probabilities.
14	<i>News</i> occurs with equal probabilities.
15	<i>Texting and Abbreviations</i> = 4 and 5 occur with probabilities .500 and .500.
16	<i>Interviews</i> occurs with equal probabilities.
17	<i>Questions and Answers</i> = 4 and 5 occurs with probabilities .500 and .500.
18	<i>Maps</i> occurs with equal probabilities.
19	<i>Recipes</i> occurs with equal probabilities.
20	<i>Health</i> occurs with equal probabilities.

*Note: The significance level is .050 displaying asymptotic significances. Source: SPSS analysis from the authors.*

*a. Exact significance is displayed for this test.*

<b>Test</b>	<b>Sig.</b>	<b>Decision</b>
One-Sample Chi-Square Test	0.007	Reject the null hypothesis.
One-Sample Chi-Square Test	0.028	Reject the null hypothesis.
One-Sample Chi-Square Test	0.028	Reject the null hypothesis.
One-Sample Chi-Square Test	0.003	Reject the null hypothesis.
One-Sample Chi-Square Test	0.033	Reject the null hypothesis.
One-Sample Chi-Square Test	0.088	Retain the null hypothesis.
One-Sample Chi-Square Test	0.003	Reject the null hypothesis.
One-Sample Chi-Square Test	0.002	Reject the null hypothesis.
One-Sample Chi-Square Test	0.003	Reject the null hypothesis.
One-Sample Chi-Square Test	0.088	Retain the null hypothesis.
One-Sample Chi-Square Test	0.011	Reject the null hypothesis.
One-Sample Chi-Square Test	0.001	Reject the null hypothesis.
One-Sample Chi-Square Test	0.032	Reject the null hypothesis.
One-Sample Chi-Square Test	0.003	Reject the null hypothesis.
One-Sample Chi-Square Test	0.201	Retain the null hypothesis.
One-Sample Chi-Square Test	0	Reject the null hypothesis.
One-Sample Chi-Square Test	0.011	Reject the null hypothesis.
One-Sample Chi-Square Test	0.142	Retain the null hypothesis.
One-Sample Chi-Square Test	0.002	Reject the null hypothesis.
One-Sample Chi-Square Test	0.003	Reject the null hypothesis.

Based on the statistical analysis, it is possible to promote sixteen out of twenty possible topics to be included in the analytical program for NCIN 0004, which coincidentally concurs with the *highly valued topics* depicted among the descriptive statistical results. It is worth mentioning that, in order to improve the arrangement and content of the previous programs as hypothesized initially, it is advisable to assess the target student's capabilities to adopt the likely competencies (content) from the CEFR throughout the micro-curriculum whilst mixing the realia of ESP within the UP and the basic English skills necessary to develop the CEFR English A2 competence level in students.

### Conclusions

The provided data set offers valuable insights into the preferences of 22 university professors regarding potential topics to be included in the NCIN 0004 syllabus.

Based on a brief measure of central tendency analysis, several topics received overwhelmingly positive responses, indicating their importance in the eyes of the professors, as compiled in Table 14.

**TABLE 14**  
*High-valued topics*

<b>TERM</b>	<b>INFERENCES</b>
<i>Routines and mundane tasks</i>	This suggests a focus on practical, everyday English usage.
<i>Surroundings</i>	Understanding and describing one's environment seems crucial.
<i>Experiences</i>	Sharing personal experiences is likely considered valuable for language development and cultural exchange.
<i>Entertaining</i>	The inclusion of engaging and enjoyable content is deemed important, perhaps for maintaining student motivation.
<i>At the restaurant</i>	Situational English, particularly in dining settings, is highlighted.
<i>News</i>	Staying informed and discussing current events appears to be a priority.
<i>Texting and Abbreviations</i>	The professors acknowledge the relevance of informal communication and digital literacy.

<i>Questions and Answers</i>	Developing strong question-and-answer skills is considered essential.
<i>Recipes</i>	The inclusion of recipes could offer a practical and culturally enriching element.
<i>Health</i>	Topics related to health and well-being are deemed essential.

Some topics received a mix of responses, suggesting they might be necessary for some but not all professors. These topics include *landmarks, family, shopping, trades, autobiography, physical appearance, at the mall, at the hospital, interviews, and maps.*

Concerning the professors' demographics, the group's diversity is worth mentioning. It is valuable that most respondents (14 out of 22) have 11-20 years or more of experience, suggesting a good representation of seasoned educators. The data shows a relatively even split between full-time and part-time professors. It is possible to compute that professors work across various shifts (morning, afternoon, night), indicating potential scheduling considerations for the syllabus. Finally, the data shows a diverse group of male and female professors. All the above enhances the demographic variety of the sample.

The already stated elements set the context of the English Common Core. Although it concerns the entire population, this context directly affects the tertiary level of education: university education and, more specifically, at the University of Panama. To deal with the realia of country of a country shifting from English as a foreign language (EFL) teaching to English as a second language (ESL) teaching at the university level, a simple course general course named NCIN might not suffice, but the entrenched reasons and forked outcomes must be assessed in separated researches. Correspondingly, a much larger sample might be required to contextualize the current status of the ESL teaching in Panama. Future samples must include responses from all players in the teaching-learning process and from different locations across Panamanian territory. These new insights are yet to be evaluated when writing the current work. With the limitations of time and scope of the current study, the authors hope that the current finds nurture future research to broaden and deepen the context of the English Common Core at the University of Panama.

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