

Phenomenography: Mapping Participants' Conceptions of the World

La fenomenografía: Cartografía de las concepciones del mundo de los participantes

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“uplifting the whole people”

— HENRY MARSHALL TORY, FOUNDING PRESIDENT, 1908

What is phenomenography? ¿Qué es la fenomenografía?

- **Phenomenography** is “an empirically based approach that aims to identify the qualitatively different ways in which different people experience, perceive, conceptualize and understand various kinds of phenomena” (Marton, 1986, 1988).

*La **fenomenografía** es "un enfoque de base empírica que pretende identificar las formas cualitativamente diferentes en que distintas personas experimentan, perciben, conceptualizan y comprenden diversos tipos de fenómenos" (Marton, 1986, 1988).*

- The term is rooted in the Greek words “phainemenon” and “graphein” which mean, respectively, appearance and description (Pang, 2003).

El término tiene su origen en las palabras griegas "phainemenon" y "graphein", que significan respectivamente apariencia y descripción (Pang, 2003).

- It was first used to explore how students understand the concept of ‘learning’.

En primer lugar, se utilizó para explorar cómo entienden los estudiantes el concepto de "aprendizaje".

What is phenomenography? ¿Qué es la fenomenografía?

- **Ontological basis:** Conceptions (understandings) of phenomena in the world are constructed in the mind and this construction is influenced by the world (context) in which one lives.

Fundamentos ontológicos: Las concepciones (comprensiones) de los fenómenos del mundo se construyen en la mente y esta construcción está influida por el mundo (contexto) en el que se vive.

- **Epistemological basis:** The conception of knowledge that underpins phenomenographic research posits that *thinking* and *experience* cannot be separated.

Fundamentos epistemológicos: La concepción del conocimiento que sustenta la investigación fenomenográfica postula que el pensamiento y la experiencia no pueden separarse.

- **Key premise:** There are a limited number of ways people understand a given phenomenon.

Premisa clave: Hay un número limitado de formas en que las personas entienden un fenómeno determinado.

What is phenomenography? ¿Qué es la fenomenografía?

- It is based on the premise that prior knowledge influences all that we learn.

Se basa en la premisa de que los conocimientos previos influyen en todo lo que aprendemos.

- The aim of phenomenographic research is to map participants' conceptions of a specific phenomenon and to delineate the variation between and among conceptions.

El objetivo de la investigación fenomenográfica es trazar un mapa de las concepciones de los participantes sobre un fenómeno específico y delinear la variación entre concepciones.

- The focus is on collective understanding, rather than individual understanding (e.g., Grade 7 students' understandings of ethnic diversity; Grade 11 students' understandings of historical significance; Primary teachers' understandings of ethnic diversity)

La atención se centra en la comprensión colectiva, más que en la individual (p.e., comprensión de la diversidad étnica por parte de los alumnos de 7º curso; comprensión de la importancia histórica por parte de los alumnos de 11º curso; comprensión de la diversidad étnica por parte de los profesores de primaria).

Methods in Phenomenographic Research

Métodos de investigación fenomenográfica

- Primary data collection method: semi-structured interview.

Método de recogida de datos primarios: entrevista semiestructurada.

- Often, the phenomenographic interview is structured around a concept-specific stimulus or springboard.

A menudo, la entrevista fenomenográfica se estructura en torno a un estímulo conceptual específico.

- Sometimes participant-produced drawings, written responses to stimuli, or dramatizations (etc.) are used as a stimulus.

A veces se usan como estímulo dibujos creados por los participantes, respuestas escritas a estímulos o dramatizaciones (etc.).

Methods in Phenomenographic Research

Métodos de investigación fenomenográfica

- The reason for using a stimulus is to provide a situation that makes some connection to the participants' life world.

Se utiliza un estímulo para ofrecer una situación que conecte con el mundo vital de los participantes.

- A stimulus also helps make an abstract concept more concrete for participants – and therefore (potentially) easier to discuss.

Un estímulo también ayuda a hacer que un concepto abstracto sea más concreto y, así, más fácil de debatir.

- A semi-projective stimulus can enable the participant to “see themselves” in relation to the phenomenon being studied.

Un estímulo semiproyectivo puede hacer al participante "verse a sí mismo" en rel. con el fenómeno estudiado.

Some examples from my research...

***Algunos ejemplos de mis
investigaciones...***

Grade 7 Students' Understandings of Ethnic Diversity

Comprensión de la diversidad étnica por parte de los alumnos de 7º curso

These girls were told that they are not allowed to wear their headscarves in school.



Source: Three Hijab Ladies. Retrieved January 31, 2003 from <http://www.fateha.com/>

These boys want to be exempt from their school's "No Hats" rule.



Source: Retrieved February 1, 2003 from <http://www.clickwalla.com/article.php?cid=114&aid=1128>

Source: Retrieved February 1, 2003 from <http://www.clickwalla.com/article.php?cid=114&a>

Ethnic Groups Want School Holidays

May 2, 2002

FREDERICTON (CNB) – Ethnic groups in New Brunswick have asked Education Minister Dennis Furlong to change the holidays in the school calendar.

“Right now the only time there is a holiday is when there is a Christian holiday, like Christmas or Easter,” a spokesperson for the Multicultural Association said yesterday.

“There should also be days off for Ramadan, Hanukkah, Kwanzaa, or Chinese New Year.”

The District Education Council, contacted today for its view on the matter, said that it views school holidays as an issue of culture, not education.

Grade 11 Students' Understandings of Historical Significance

Comprensión de la importancia histórica por parte de los alumnos de 11º curso

**“Create a timeline of the 10 most significant events in Canadian history”
(Group activity)**

“Crear una línea del tiempo con los 10 acontecimientos más significativos de la historia de Canadá” (Actividad en grupo)



Date: October 30th, 1995
The Quebec Referendum

The 1995 Quebec referendum was the second referendum in Quebec (1980) that asked people living in Quebec whether Quebec should become an independent country. By Oct of 1995, Canadians had traveled to Montreal for what became known as the final results of the referendum were very close: 49.4% of Quebecers negotiating separation from Canada and 50.6% of Quebec voters



Date: 1885
Imposition of the Chinese Head Tax

When the Canadian Pacific Railway was finished, the Federal Government decided to restrict the immigration of Chinese to Canada. The first federal anti-Chinese bill was passed in 1885. It took the form of a head tax of \$50 imposed, with only a few exceptions, upon every person of Chinese origin entering the country. No other group was targeted in this way.

Vincent, Teresa, Mark, Sam (Immigrants)

- Confederation (1867)
- Building of the Canadian Pacific Railway (CPR) (1881-1885)
- Record Immigration Numbers (1913)
- Winnipeg General Strike (1919)
- The Person's Case (1929)
- Canada Enters World War II (1939-1945)
- Pearson Wins Nobel Peace Prize (1957)
- Canada Enacts Multiculturalism Policy (1971) and Multiculturalism Act (1988)
- Canada Act Passed (1982)
- Quebec Referendum (1995)

Minha, Adélie, Dao-Ming (immigrant, Canadian-born, immigrant)

- Creation of Indian Residential Schools (mid 1800s)
- Recruitment of Chinese workers to build the CPR (1880s-1890s)
- Imposition of Chinese Head Tax (1885)
- Louis Riel and the North-West Rebellion (1885)
- Record Immigration Numbers (1913)
- The October Crisis and the War Measures Act (1970)
- Canada Enacts Multiculturalism Policy (1971) and Multiculturalism Act (1988)
- Collapse of the "Meech Lake Accord" (1990)
- Quebec Referendum (1995)
- The Marshall Decision (1999)

Primary Teachers' Understandings of Ethnic Diversity

Comprensión de la diversidad étnica por parte de los profesores de primaria

Please bring to the interview something that you have used or are currently using to teach about ethnic diversity. This could be a favourite lesson plan, a worksheet, an activity, a textbook, a poster, a storybook, a prop of some kind (like a puppet), a movie – really, whatever you would like to bring to the interview to help start a discussion about teaching about ethnic diversity. You don't need to create anything new – just bring something that you normally use.

Por favor, trae a la entrevista algo que hayas utilizado o estés utilizando actualmente para enseñar la diversidad étnica. Puede ser un plan de clase favorito, una hoja de ejercicios, una actividad, un libro de texto, un póster, un libro de cuentos, un accesorio de algún tipo (como una marioneta), una película... en realidad, cualquier cosa que quieras traer a la entrevista para ayudar a iniciar un debate sobre la enseñanza de la diversidad étnica. No hace falta que crees nada nuevo, basta con que traigas algo que utilices normalmente.

Interview Techniques **Técnicas de entrevista**

- If you have more than one stimulus, let the participant select a stimulus and take the interview where they want it to go while still staying on topic.

Si tienes más de un estímulo, deja que el participante elija uno y lleve la entrevista por donde él/ella quiera sin salirse del tema.

- The interviewer should try to lead the participant into a process of **active reflection (metacognition)** so that the participant is able to reflect upon and articulate their understandings about the concept or phenomenon under study.

*El entrevistador debe intentar llevar al participante a un proceso de **reflexión activa (metacognición)** para que pueda reflexionar y articular su comprensión sobre el concepto o fenómeno objeto de estudio.*

- Ask follow-up questions that prompt the participant to explain their thinking in different ways.

Haz preguntas de seguimiento que inciten al participante a explicar su pensamiento de diversas formas.

- Use open-ended questions (no “yes/no” answers).

Usa preguntas abiertas (que no sean de respuesta dicotómica: “sí/no”).

Interview Techniques **Técnicas de entrevista**

- Engage in “empathetic listening” – pick up on meanings, interpretations, and understandings within the participant’s responses (can lead to more questions, deeper thought).
Escucha con empatía: captar los significados, las interpretaciones y la comprensión de las respuestas de los participantes (puede dar lugar a más preguntas y a una reflexión más profunda).
- Prepare a list of guiding questions. Ideally questions emerge from what the participants have to say.
Prepara una lista de preguntas-guía. Lo ideal es que las preguntas surjan de lo que digan los participantes.
- Give participants time to reflect, elaborate, clarify, discuss and provide examples.
Da tiempo a los participantes para que reflexionen, elaboren, aclaren, discutan y aporten ejemplos.
- Other techniques: silence, use of non-technical language.
Otras técnicas: silencio, uso de un lenguaje no técnico.
- Create a relaxed, safe environment. *Crea un entorno relajado y seguro.*

Interview Techniques **Técnicas de entrevista**

- The interviewer should be aware of personal value judgments that might:

El entrevistador debe ser consciente de los juicios de valor personales que pueda tener, ya que estos pueden:

- Influence the way the interviewer interprets the participant's responses

Influir en la forma en que el entrevistador interpreta las respuestas del participante.

- Affect the type of follow-up questions that the interviewer might ask (leading questions, judgmental, corrective...)

Afectar al tipo de preguntas de seguimiento que el entrevistador podría hacer (preguntas capciosas, críticas, correctivas...)

- Make the interviewer teach the participant the “right” answer (according to the interviewer's beliefs/knowledge)

Hacer que el entrevistador enseñe al participante la respuesta "correcta" (según las creencias/conocimientos del entrevistador)

Data Analysis in Phenomenography **Análisis de datos en fenomenografía**

- Read through all the transcripts to become very familiar with the data.
Lee todas las transcripciones para familiarizarse con los datos.
- Pick out all of the differences of meaning in relation to the concept, expressed in the transcripts.
Señala todas las diferencias de significado en relación con el concepto, expresadas en las transcripciones.
- Group the differences to form the smallest number that reflect the main differences in the transcripts, and describing their essence, form categories.
Agrupar las diferencias para formar el menor número que refleje las principales diferencias en las transcripciones y, describiendo su esencia, forma categorías.

Data Analysis in Phenomenography **Análisis de datos en fenomenografía**

- Arrange these categories both horizontally and hierarchically, where possible, in order to reflect the level of understanding of the concept and generate a category system.

Ordena estas categorías horizontal y jerárquicamente, siempre que sea posible, para reflejar el nivel de comprensión del concepto y generar un sistema de categorías.

- Categorize each participant's answer according to the category system.

Clasifica la respuesta de cada participante según el sistema de categorías.

- Ask independent judges to categorize the data using your system to verify, confirm, and/or rethink your analysis.

Pide a jueces independientes que categoricen los datos usando tu sistema para verificar, confirmar y/o replantear tu análisis.

Data Analysis in Phenomenography **Análisis de datos en fenomenografía**

- There is an additional analytic step required of phenomenographic researchers: Creating a graphical representation of your analysis; this is called the “outcome space”.

Hay un paso analítico adicional que se exige a los investigadores fenomenográficos: Crear una representación gráfica de tu análisis; esto se denomina «espacio de resultados».

- Rather than making simple comparisons of the conceptualizations organized in the outcome space, researchers must also attempt to draw out any relationship between the conceptualizations.

En lugar de realizar simples comparaciones de las conceptualizaciones organizadas en el espacio de resultados, los investigadores también deben intentar extraer cualquier relación entre las conceptualizaciones.

Data Analysis in Phenomenography **Análisis de datos en fenomenografía**

- The relationships are explored in an effort to discern the levels of sophistication of the understandings collected from the participants.

Las relaciones se exploran en un esfuerzo por discernir los niveles de sofisticación de las comprensiones recogidas de los participantes.

- This may mean ranking one category of description above another

Esto puede significar dar prioridad a una categoría de descripción sobre otra.

- Equally possible is that the categories are placed side-by-side, denoting an equal level of sophistication.

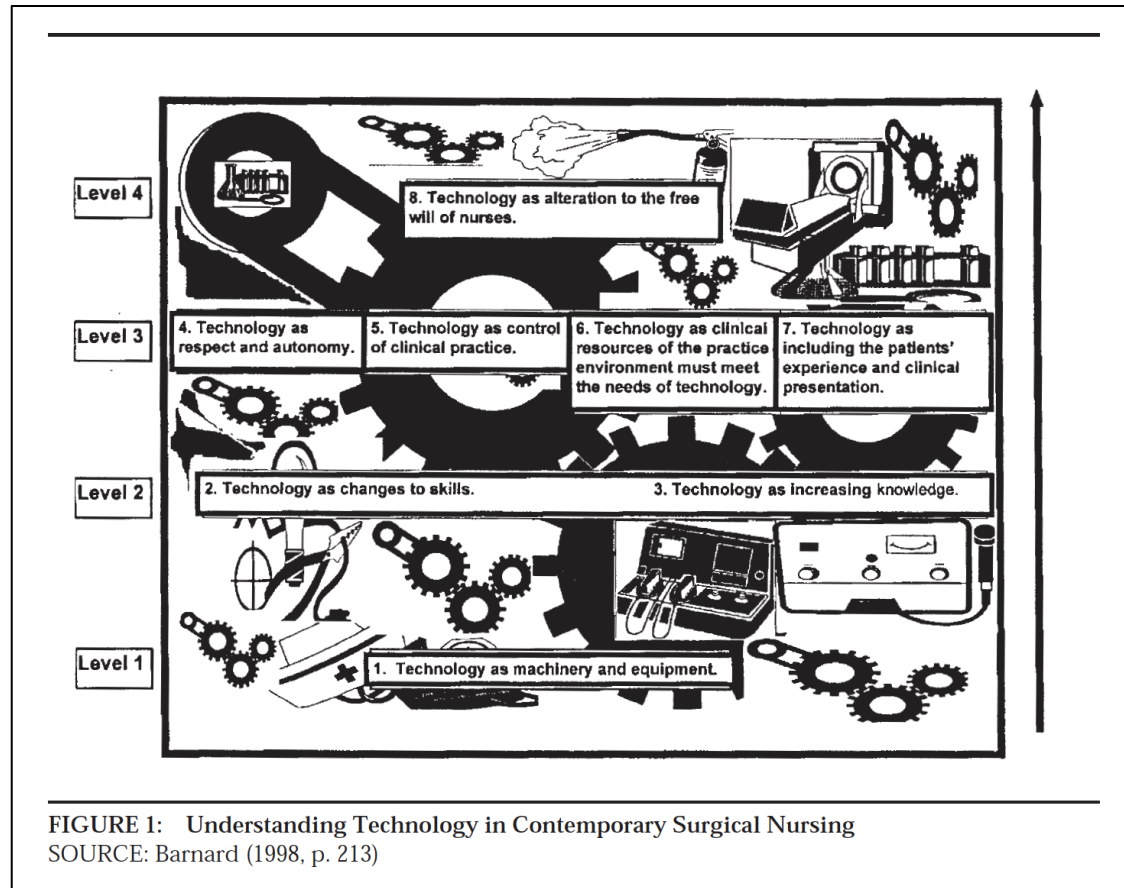
Es igual de posible que las cat. se pongan una al lado de la otra, mostrando un mismo nivel de sofisticación.

Some examples of the “outcome space” from various research studies...

Algunos ejemplos del “espacio de resultados” de diversos estudios de investigación...

Understanding Technology in Contemporary Surgical Nursing (Barnard, 1998, p. 213)

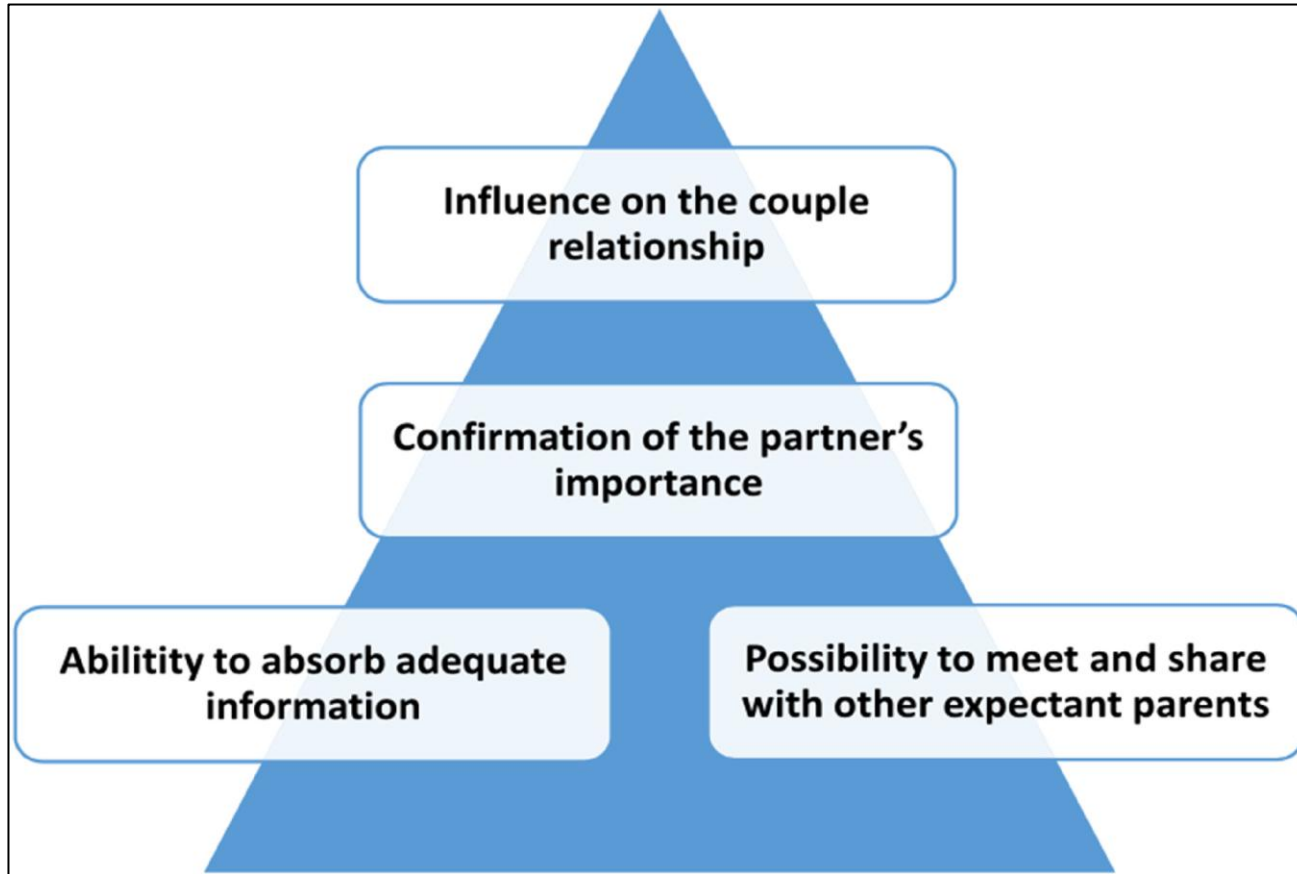
Comprender la tecnología en la enfermería quirúrgica contemporánea (Barnard, 1998, p. 213)



Cited in: Barnard, A., McCosker, H., & Gerber, R. (1999). Phenomenography: a qualitative research approach for exploring in health care. *Qualitative Health Research*, 9(2), 212-226. doi: 10.1177/104973299129121794

Pregnant women's partners' perceptions of professional support during pregnancy (Bäckström et al., 2017).

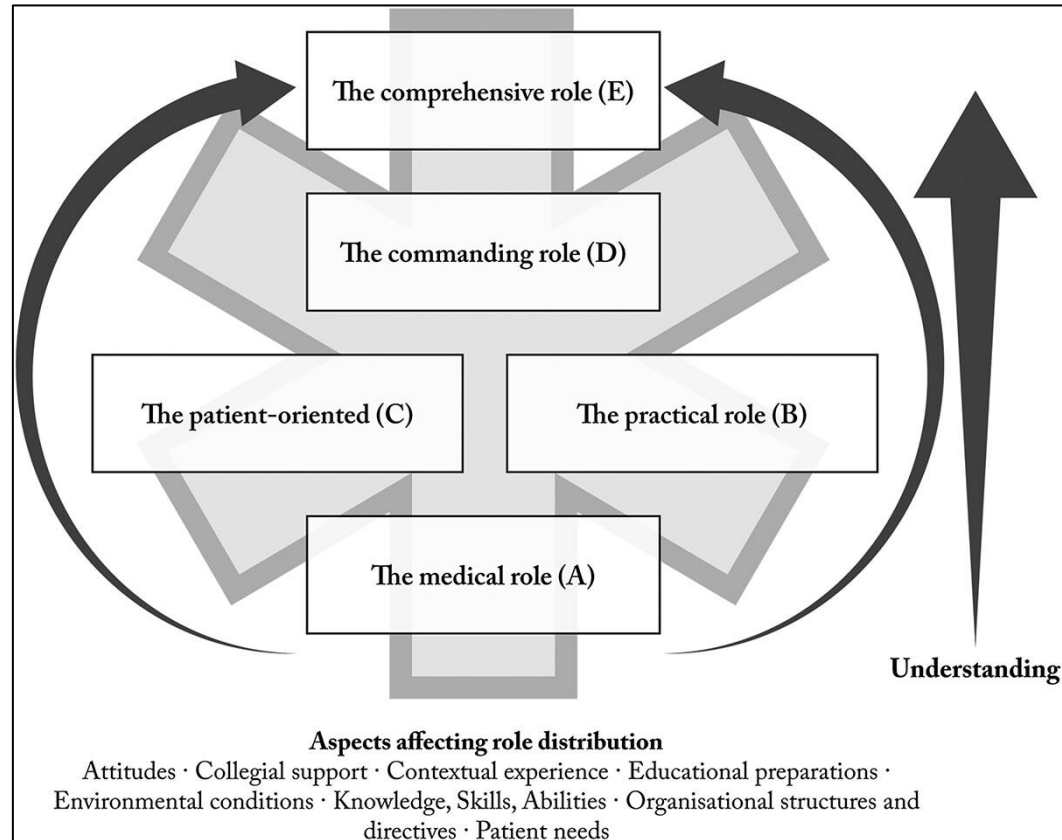
Percepciones de las parejas de las mujeres embarazadas sobre el apoyo profesional durante el embarazo (Bäckström et al., 2017).



Cited in: Balding, K. J., Geraghty, S., Timler, A., Pezaro, S., & McChlery, S. (2024). Phenomenography: A useful methodology for midwifery research. *Journal of Advanced Nursing*, 80, 2598–2610. <https://doi.org/10.1111/jan.15978>

The ways specialist nursing students understand the work in the ambulance service

La forma en que los estudiantes de enfermería especializada entienden el trabajo en el servicio de ambulancias



Wallin, K., Bremer, A., Fridlund, B., Hörberg, U., & Werkander Harstäde, C. (2022). The ways specialist nursing students understand the work in the ambulance service - a national Swedish phenomenographic study. *International Journal of Qualitative Studies on Health and Well-Being*, 17(1). <https://doi.org/10.1080/17482631.2022.2099023>

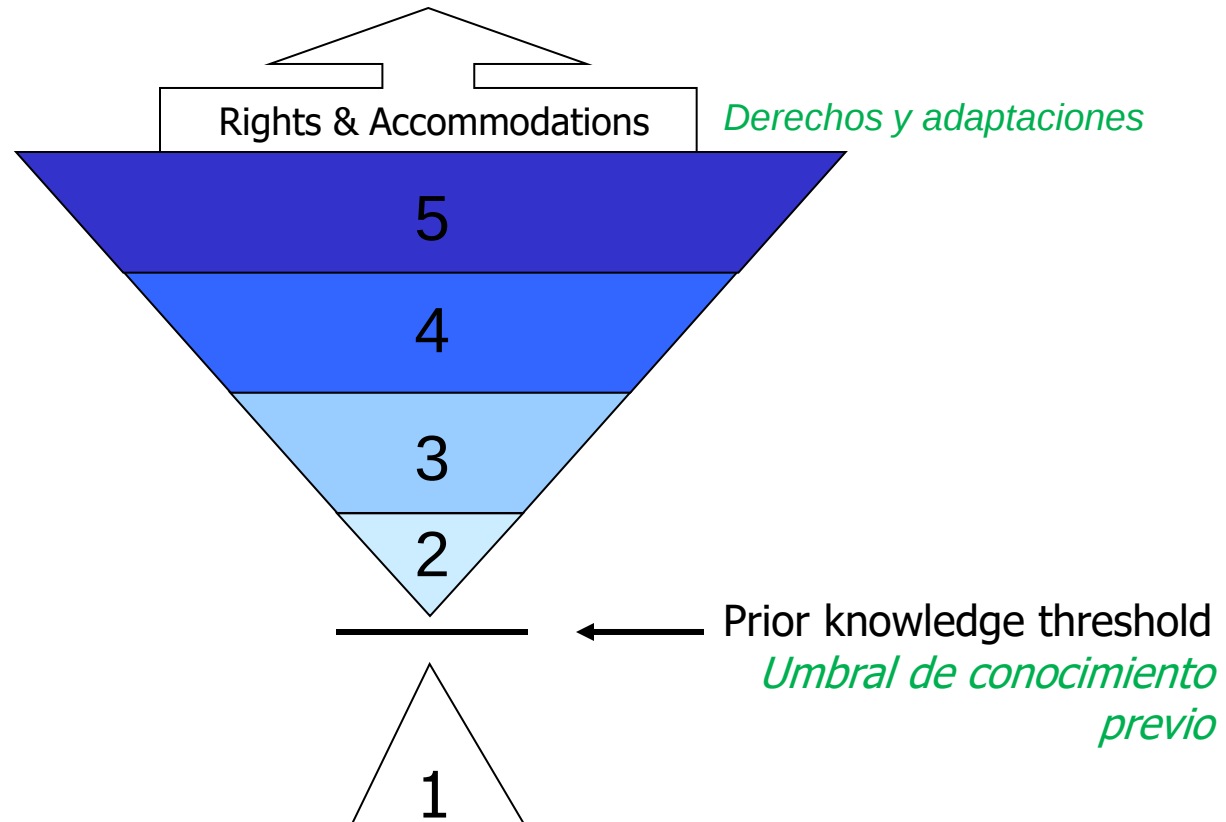
5 Qualitatively Different Ways of Understanding Ethnic Diversity (Gr 7 Students)

5 Formas cualitativamente diferentes de entender la diversidad étnica (alumnos de 7º curso)

5	Is likely determined by birth; expression is guided and bound by religious doctrine	Exists in Canada & recognizes FN and Francophones as indigenous to NB	Includes language (limited understanding)	Legal accommodations are deemed appropriate; safety is still a concern	Is protected by law (rights)
4	Acknowledges the historic, communal, and traditional nature of religion and religious practice & includes Native spirituality	FN and Francophones live in NB but other ethnic group members come from elsewhere	Language is only a communication tool	Accommodations are acceptable as long as safety is not a factor and the dominant group is not negatively affected	For FN only, involves certain rights because of their history
3	Is somehow connected to religion, religious practices, and culture	Is associated with specific groups of people and/or countries		Might accommodate in some situations, “depending on the numbers”	First Nations (FN) have rights but no explanation given
2	Might involve religion and/or culture	Exists somewhere else in the world			
1	No understanding of ethnic diversity.				

Rights, accommodations and levels of understanding of ethnic diversity

Derechos, adaptaciones y niveles de comprensión de la diversidad étnica.



From: Peck, C. L., & Sears, A. (2005). Uncharted territory: Mapping children's conceptions of ethnic diversity. *Canadian Ethnic Studies/Études ethniques au Canada*, 37(1), 101-120.

Students' Understandings of Historical Significance

Comprensión de la importancia histórica por parte de los alumnos

Narrating Canada's History

"Founding of the Nation" **«Fundación de la nación»**

This narrative recounts the history of the first inhabitants of Canada (before it was a nation) and the events that "built" the country.

Students rely on **pattern and causal** types of significance to explain the historical significance of events in Canadian history.

"Diverse and Harmonious Canada" **«Un Canadá diverso y armonioso»**

This narrative recounts the history of Canadians overcoming prejudice and discrimination in order to establish a harmonious, multicultural, multinational Canadian identity.

Students rely on **symbolic** significance and significance for the **present-future** to make their arguments about the historical significance of particular events.

"Diverse but Conflicted Canada" **«Un Canadá diverso pero conflictivo»**

This narrative recounts the history of multiculturalism in Canada, with an explicit focus on conflicts and tensions that have arisen as a result of society and government's responses to the nation's changing demography.

Students rely on **symbolic significance** and significance for the **present-future** to ascribe historical significance to events in Canada's past (especially the legacy of racism on contemporary society).

From: Peck, C. L. (2010). "It's not like [I'm] Chinese and Canadian. I am in between": Ethnicity and students' conceptions of historical significance. *Theory & Research in Social Education*, 38(4), 574-617.

Primary Teachers' Understandings of Ethnic Diversity

Concepciones de los profesores de primaria sobre la diversidad étnica

Ethnic Diversity as an "Accessory":

People choose to express their ethnic identity; it is not an inherent part of their identity.

La diversidad étnica como «accesorio»

Ethnic Diversity as Foreign:

Diversity exists and/or originates outside of Canada

La diversidad étnica como algo extranjero

Ethnic Diversity as Exotic:

Involves strangeness, uncertainty about meaning, but also, for some, a desire to possess the same imagined exotic quality of "the other".

La diversidad étnica como algo exótico

Ethnic Diversity without Difference:

Colour-blind philosophy of sameness ("people are people").

Diversidad étnica sin diferencias

From: Peck, C. L., & Sears, A. (2023). Teachers' understandings of ethnic diversity: After 50+ years of official multiculturalism in Canada, are we any further ahead? *Canadian Issues/Thèmes canadiens* (Spring/Summer), 39-42.





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