

## **BILINGUAL DISCOURSE ANALYSIS IN YOUTUBE COOKING VIDEOS**

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### **Abstract**

The study on YouTube cooking videos remains limited particularly those featuring bilingual discourse, psychosemantic techniques, and episodic memory. This paper aims to highlight the culinary nuances demonstrated by chefs as they describe each recipe. The study focuses on showcasing the distinct linguistic aspects present in the cooking videos. The examination of how chefs employ semiotic analysis, discourse analysis, psychosemantic strategies, and episodic memory techniques in their presentations forms the basis for this study. The research is based on a systematic collection and analysis of selected YouTube cooking videos. The findings emphasize YouTube's role as an educational platform and illustrate how technology facilitates knowledge sharing across the globe. The insights from this study contribute to a deeper understanding of the diverse linguistic and instructional elements embedded in YouTube cooking videos.

**Key Words:** Bilingual, discourse, psychosemantic memory, episodic memory, semiotic

### **Introduction**

The importance of audiovisual media, such as YouTube, is undeniable when it comes to enhance the skill acquisition, particularly in regions with limited access to traditional educational resources. YouTube plays a vital role in fostering the competency of learning and developing. Due to its accessibility and ability to reach individuals in remote areas.

In the present decade, people enjoy their leisure time with joy and pleasure through entertainment platforms, such as YouTube. The contents of the YouTube videos are created and presented in the form of sound and moving visuals encompassing audio and video elements of various genres and themes. YouTube videos are “long – form conversation podcast . . . a combination of sound, mostly linguistic sounds, moving image” (Johansson 2021). Johansson's observations highlighted effectively the significant impact of the media, especially amidst the challenges posed by the Covid-19 pandemic, on connecting the individuals through diverse means.

YouTube breaks the barrier of age in acquiring knowledge and skills, because learning is a continuous journey that transcends time and age boundaries. Nowadays the pursuit of knowledge has no limitations. Because even the aged individuals who may not have the opportunity to visit the educational institutions can

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benefit from the vast array of online resources like YouTube, which serves as a valuable platform for learning. “YouTube is considered a source of online material that can play a key role in the teaching and learning field” (Almurashi 2016).

Through the use of videos, individuals may immerse themselves in the language learning process, though the traditional educational resources are limited to access. In particular, YouTube has emerged as a first choice for language learners because of its accessibility and the diverse range of educational content, which allow users to learn from anywhere and anytime in the world. (Euro education, nd)

Bilingual discourse analysis explores the relationship between the language and its meaning, drawing on insights from psychology and semantics. The theoretical framework established by Scheer and Reiff (1959) laid the foundation for further research in this area, shedding light on the complexities of usage of language and its interpretation. “Semantic memory is a category of long-term memory that involves the recollection of ideas, concepts, and facts commonly regarded as general knowledge. Examples of semantic memory include factual information such as grammar and algebra” (Perera 2023). The analysis of cooking videos on the YouTube platform, reveals a range of factors, including semantic considerations and the role of episodic memory in culinary learning. Only with a partial understanding about the preparation of a particular dish, viewers can deepen their knowledge through instructional videos and cookbooks, which provide detailed guidance on ingredients, techniques, and presentation. “Semantic memory involves general knowledge, episodic memory involves personal life experiences” (Perera 2023). The use of bilingual delivery in cooking videos adds an additional layer of richness and diversity that reflects the global nature of culinary traditions.

In the context of Indian cooking videos on YouTube, bilingualism is a common feature that reflects the cultural and linguistic diversity of a region. The use of bilingualism has become a natural and integrated aspect of everyday life, as individuals navigate between different languages in their daily interactions. Each presenter has a unique style of introduction and body language. “Discourse is combination of the linguistic (verbal) and non-linguistic systems such as behavior, actions, body language and social situations” (Sharma 2013).

Chefs who produce cooking videos often use bilingualism as a tool to connect with their audiences and convey information effectively. This practice has become a standard approach in culinary education, highlighting the importance of language as a medium for sharing knowledge and cultural insights. “Bilingualism refers to the ability to use two languages in everyday life. Bilingualism is common and is on the rise in many parts of the world” (Heinlein and Williams 2018).

In the digital era, where technology plays a central role in everyday life, individuals are turning to video content for learning and entertainment purposes. Cutline communications said, “indeed, the volume of searches for the term “recipe” on YouTube has quadrupled since January 2008” (Lindeman 2010). Individuals looking to learn new cooking techniques or recipes can benefit from watching instructional videos on YouTube, which provides visual demonstrations and step-by-step guidance. Unlike traditional cookbooks, which offer limited information, YouTube videos offer a more immersive and practical learning experience that allows viewers to gain valuable insights and tips from experienced chefs and culinary experts.

Chefs who create cooking videos on YouTube often showcase specific cultural traditions and practices, highlighting the unique flavors and ingredients associated with different cuisines. During festive season, chefs feature special recipes that are traditionally prepared during celebrations, providing viewers with a glimpse of

the cultural significance of these dishes. Additionally, chefs share anecdotes and stories related to the dishes they prepare, offering a deeper understanding of the cultural context in which the recipes originate

Bilingualism plays a major role in the society. During social interactions, individuals acquire second language by engaging in conversations and analysing words within a discourse context. Bilingualism is a complex phenomenon that is influenced by various social factors. “Studies have suggested that bilinguals show certain advantages when it comes to social understanding” (Heinlein and Williams 2018). The primary aim of this study is to analyse the cooking videos in Tamil and Hindi languages on YouTube, a domain which has not been extensively explored by language experts. This study offers a bilingual discourse analysis that focus on the psychosemantic and episodic memory aspects of featured chefs. The research questions were as follows.

- Will YouTube help at the semiotic level in discourse analysis?

The utilization of YouTube as a platform for semiotic discourse analysis raises intriguing questions about the differences between this medium and traditional recipe books. Cooking videos on YouTube presents a unique opportunity for viewers to engage with culinary content on a visual and interactive level, allowing for more in-depth analysis of the discourse embedded in the videos. Unlike conventional cookbooks, YouTube videos offer additional layers of information that can enhance the audience’s understanding and interpretation of the demonstrated culinary processes.

- Is YouTube cost friendly to the user at the level of education?

Educational institutions often facilitate the students for internet access, enabling them to use online resources such as YouTube for learning purposes. In particular, cooking videos offer a valuable source of knowledge for preparing a wide range of dishes, including traditional recipes that may not be readily available in other formats.

### **Review of Literature**

Narration plays a key role in cooking videos, as it guides viewers through the steps of recipe preparation while also conveying cultural information on an audiovisual platform. Bilingual discourse analysis further explores how chefs narrate recipes by drawing on psychosemantic techniques and episodic memories. Forchtner’s (2021) article, *Introducing ‘Narrative in Critical Discourse Studies’*, highlights the valuable connection between narratives and critical discourse analysis in constructing lengthy paragraphs and complex sentence structures. Forchtner emphasizes that storytelling has the power to shape readers’ perceptions and influence their understanding. While narratives emphasize the overall meaning of a story, critical discourse analysis often examines individual clauses rather than the meaning of isolated words.

Discourse exists in various forms, with political discourse being particularly prominent in Western societies. Aronson’s (2020) study, *Victimhood in Swedish Political Discourse*, explored the representation of victims through procedural discourse. Using positioning theory, this article examines parliamentary speeches in Sweden to analyse how language shapes narratives around victimhood. Linguistic researchers have highlighted how the sympathy that victims require is influenced by political rhetoric. The study reveals how discourse analysis uncovers the complexities of victims’ experiences conveyed through political language.

In the article entitled *Enhanced Prediction of User-Preferred YouTube Videos Based on Cleaned Viewing Pattern History*, by Peter Braun et al. (2017) discussed how data collection has become more efficient in today’s technological landscape. They explain how YouTube enhances user experience by filtering out irrelevant content and, offering viewers more personalized recommendations. With the prevalence of

microphone-enabled applications, video suggestions are increasingly tailored to align viewer preferences and conversations with peers. The study also examined participants' preferences regarding video duration, offering insights into how chefs adapt their content to cater to audience tastes. This research significantly informs the present study by highlighting how chefs tailor cooking demonstrations based on viewer preferences.

In the article, *Bilingualism and the Metaset*, Avila and Duncan (2013) highlight how two languages can coexist naturally, even if one is not the speaker's native language. They argued that bilingualism allows for meaningful, well-developed conversations by enabling both languages to complement each other. According to Avila and Duncan, speaking two languages fluently is a sign of wisdom and knowledge. In bilingual households, neither language dominates nor they maintain a balanced presence through speakers' active use. Chefs in cooking videos often use the language spoken in their region. However, they frequently incorporate English to reach non-native audiences, effectively employing bilingualism to broaden their views.

Heidi Rontu's (2007) article *Codeswitching in Triadic Conversational Situations in Early Bilingualism* explored how children practice bilingualism within family interactions. Triadic conversations typically involve two parents and a child or a single parent, an elder sibling, and a child. In such situations, children switch between languages based on psychological and sociolinguistic factors. While this dynamic is common in family settings, a similar form of code-switching is observed in YouTube cooking videos, in which chefs alternate between languages to connect with a wider audience.

In his article *Discourse Cohesion in Sign and Speech*, Gary Morgan (2000) explores how narration functions as a key element in communication. Morgan emphasizes that grammar plays a crucial role in structuring speech, whereas discourse ensures continuity in spoken language. His study also examines British Sign Language (BSL), particularly its use among children, to highlight how sign language facilitates communication. Morgan notes that narration stems from shared experiences, which are also evident in YouTube videos. Chefs often share personal experiences with their dishes and, sometimes incorporate sign language. Viewers analyse chefs' spoken content at the discourse level to grasp deeper meanings. Similarly, YouTube narration and sign language can be examined through semiotic and discourse analysis, as Morgan's article suggests. In cooking videos, chefs frequently use gestures and actions to indicate factors, such as portion size, thickness, and consistency, offering visual cues that complement their verbal instructions.

In the article *Parental Discourse and Codemixing in Bilingual Children*, Elena Nicoladis and Fred Genesee (1998) discussed how children often mix languages when speaking. While some parents encouraged this practice, others insisted on using only one language. The authors argued that discourse plays a significant role in shaping language blending. Children who speak two languages develop an understanding of their differences through pragmatic cues. Similarly, in YouTube cooking videos, chefs often switch between languages to effectively deliver their content and, blend linguistic elements to engage diverse audiences.

The importance of "autobiographical memory" (Munera et al. 2014) in comprehending one's own experiences is highlighted in the article *Episodic and Semantic Autobiographical Memory in Temporal Lobe Epilepsy* by Munera et al. The recall of prior experiences and encounters that people have experienced over time is known as autobiographical memory. This study, focused on the complex brain mechanisms underlying episodic and semantic memory, which were conducted in Spanish but presented in English. According to this study, most memories are formed up to the age of 30 years. Remarkably, all the cooks in this study were older than 30 and successfully engaged and captivated their audience by using their semantic and episodic memories.

In the study, *Episodic and Semantic Memory Contribute to Familiar and Novel Episodic Future Thinking*, Wang et al. (2016) discuss how episodic and semantic memory are essential in forming both familiar and novel episodic future thinking. This is closely related to the use of both episodic and semantic memories to anticipate future events. The cognitive processes involved in absorbing information focused on the future are supported by semantic memory, whereas episodic memory acts as a link between one's past experiences and the projection of future events. The study also explored the differences in memory abilities between people with Alzheimer's disease and dementia, highlighting the mutually beneficial interaction between episodic and semantic memory.

Istvan Aranyosi's (2020) investigation of *Preterception: Memory as Past-perception* clarifies the idea that memory incorporates a partial understanding of the past. People are bound to their personal history through the shards of prior events that are inherent in their memories. By definition, memory is anchored in the past and has no direct link with events that are happening now or in the future. Every person has particular memory that make up a distinct tapestry that defines who they are. Aranyosi says that recalling the past does not always mean going through the same thing again.

In his work on the *Psychological Evidence for the Distinction Between Episodic and Semantic Memory*, Michael David Horner (1990) asserted that semantic memory plays a pivotal role in linguistic comprehension, while episodic memory pertains to the retention of specific events and experiences within the brain. Horner asserts that semantic memory serves as the foundation for the construction and retrieval of episodic memories. Without scaffolding provided by semantic memory, episodic memory would be severely compromised.

This comprehensive review of the literature underscores the thematic threads linking the aforementioned articles, encompassing discussions on political discourse, bilingual code-switching, narrative discourse, family language dynamics, and the nuances of individual memories through the lenses of psychosemantic and episodic memory. The study on Bilingual discourse analysis, psychosemantic and episodic memory in YouTube cooking videos have not been carried out and thus it paves a research gap for this study.

## **Methodology**

This section explains the process and procedures used for investigation. YouTube videos served as the main data source for this study. The cooking videos of renowned chefs from Tamil Nadu and northern part of India were examined in this study. An equal number of videos are chosen from the Tamil and Hindi languages to guarantee objective analysis.

The perusal of chef's words in the videos is the first stage of the analytical process. Other data sources for this study includes the methods and written descriptions seen in the video descriptions, in addition to the oral information. The selected YouTube cooking videos have been reviewed qualitatively, with the primary requirement that they were not created with linguistic analysis. Donaldson and Endel Tulving's theoretical framework forms as the basis for evaluating the videos. To compare the ways in which culinary information is expressed and articulated in two languages, the selection of dishes is included. During the COVID-19 pandemic, people accessed the videos on YouTube for cooking advice and inspired to prepare the same for them. To explore the bilingual discourse in the cooking videos on YouTube, the dishes which were frequently shared by the Chefs are selected for in depth analysis.

It is necessary to watch the YouTube videos and pay close attention to the chefs' language to analyze multilingual discourse, psychosemantic elements, and episodic memory. It is evident from the videos that the chefs' usage of semiotics and food descriptions is bilingual, in addition to dominant spoken language. The videos are analyzed objectively by adhering the principles and theoretical framework of bilingual discourse. As YouTube videos are easily accessible to the people from anywhere and anytime. This makes them more valuable, unless individual hosts or production teams do not limit the access to the videos. On the other hand, traditional television culinary shows cannot be accessible from anywhere anytime, since it depends on the broadcast time.

Eminent chefs Dhamodharan (Damu), Venkatesh Bhat (Bhat), Ranveer Brar (Ranveer), and Kunal Kapur (Kunal) have been selected for Bilingual Discourse Analysis (BLDA). Their cooking videos have been analysed from various perspectives including psychosemantics, episodic memory, cultural perspectives, culinary vocabularies, signs, and semiotics employed during cooking demonstrations. The videos of the chefs are analysed such that focusing on the way they articulate themselves while preparing each dish. The criteria for selecting these four chefs encompass their bilingual capabilities, as well as their popularity across television, YouTube, and within their respective culinary domains. The primary aim of this article is to delve into the realm of bilingual discourse analysis using the videos of the chefs who delivered in bilingual form of blending the Eastern and Western languages.

The videos show the chefs' high level of episodic and semantic memory, which is a key idea considered for this research. There have been 16 videos considered from Tamil and Hindi languages each containing 8 videos in this study. The main objective of this study is to analyse the language components and bilingual vocabulary used in chef conversations. The videos are examined from the perspectives of psychosemantic and episodic evaluation, bilingualism, and discourse analysis. With differences in video length amongst chefs like Dhamu, Kunal, Venkatesh Bhat, and Ranveer, the total duration of all the videos under consideration come roughly from 100 to 150 minutes.

### **Discussion: Bilingual Discourse Analysis (BLDA)**

The analysis of cooking videos within the framework of BLDA sheds light on how chefs use language to engage with their audiences. Each of the four chefs presented a unique style in their culinary demonstrations, primarily focusing on various cuisines. Indian recipes are closely related with traditions and customs and some of them are emphasized specifically relevant to festivals.

Bilingualism influences all aspects of human life and often manifests itself. People frequently switch between languages, resulting in everyday interactions that contain various linguistic elements. Given the blending of many culinary traditions and ingredients, food discourse involves bilingual components. Exposure is a prerequisite for language acquisition, and many persons pick up new vocabulary through social interaction. When mobility of people is limited, educational videos featuring cooking demonstrations can help people learn the languages too. These videos not only serve as practical directions for preparing food but also provide a rich vocabulary peculiar to many cuisines, which contributes to language acquisition beyond the limitations of traditional manuals.

In general, the choice of words and semiotic properties have a significant impact on the intended audience. For instance, Damu starts with a quick preview of the dishes that will be prepared by blending of Tamil and English, even though his regional language is Tamil. Damu also often incorporates his love for a

bilingual approach into his recipes, by naming the ingredients not only in Tamil but also in English (though the text overlays only show ingredients in English as the language has more of a universal appeal for a larger audience).

In the beginning, Bhat shows the dish before the demonstration of cooking. The recipe follows in prose as it does not follow the common style of listing out ingredients, besides he adds them towards the end of the recipe. He speaks in English and Tamil and also occasionally slips in one or two words from other languages on culinary terminologies in the course of the demonstrations to make viewers more knowledgeable.

The appearance of his name in the corner of the screen distinguishes him from other three chefs. His uniqueness is reflected in the method of explaining any culinary terms in simple English and Tamil and hence his audiences are not distracted in translations or jargons. Another recurring theme observed in his videos that he stamps the dish with the word “fantastic” towards the end of the demonstration.

The thumbnails of the videos of Ranveer Brar and the described ingredients are in Hindi and English languages. He follows a method of demonstration that shows each ingredient with the appearance of its name in English on the screen. He used English phrases to emphasize and endorse specific cooking tools, entwining languages. The chef slips easily between English and Hindi while storytelling about his experiences. Sometimes he mixes both languages without pausing, and his words create an electrifying linguistic environment. By mimicking the sounds of dishes simmering and boiling, he enhances the sensory experience for those watching.

On the other hand, Kunal Kapur follows bilingualism with transliteration in video thumbnails and the descriptions of ingredients are in English. He uses alternative names for his dishes, as seen in the thumbnail for a different exploration. By using inclusive language such as “our,” he creates a bond with the audience, giving them a shared gastronomic experience.

Apart from the different styles followed by the four chefs, there are certain similar qualities they share, such as the use of discourse markers, opening the subject in an inclusive manner by making no assumptions of any prior knowledge of the audience, and gender neutrality. Moreover, they share classic recipes with their audience when they offer helpful tips and context regarding the ingredients. The chefs always speak in the imperative tone during their demonstrations, directing the viewers through the step - by - step process. While the cooking steps are not numbered per se, they are very well structured. The lists of ingredients and descriptions are in English, a nod of a cosmopolitan crowd.

Chefs frequently recommend other dishes to prepare in tandem with the main recipe, giving them a well-rounded cooking session. They have various video settings and backgrounds, resulting in live visual appealing presentation styles. Their food description is mostly in English adjectives. While Bhat and Ranveer make their final touches with use of facial expressions, the four chefs utter the names of their ingredients in English.

Chefs also share other supplement recipes, providing different contents and appeals. Three of the chefs provided exact measurements of their ingredients in the video descriptions, makes it easy for viewers to prepare the recipes, unlike Bhat, who leaves out this information. YouTube videos on cooking evoke both semantic and episodic memory processes. These videos consist of explanation of chefs about the process of learning a dish. Semantic memory used to show the factual aspects of the food being cooked. Episodic memory, in contrast, is personal and connected to specific events, while semantic memory offers more abstract and public knowledge.

The use of language is particularly important in YouTube videos, as it engages the audience. In

particular, semiotic languages are important for attracting audience attention. Beyond English, chefs frequently use words and phrases from the cuisine they make to bring authenticity to the cooking experience. Besides learning about food, viewers learn about preparations specific to the cuisine and its terminologies. The changes in language occurs in bilingual, the chefs use English in parallel with regional language at various moments in the video. The name of dish often appears in English along with transliterations in regional languages such as Hindi or Tamil. To translate this complexity, tables for the BLDA model's approach incorporate psychosemantics and episodic memory as additional dimensions of language use in YouTube videos.

The inferences on the cooking videos about psychosemantic and episodic memory are given Table 1 for the dish named potato curry by the chefs.

**Table 1. Potato curry preparation**

Chef	Dish name	Tone	Verbs and adjectives	Structure	Semiotic phase
Damu	Potato peas curry from Tamil to English and the one in English as peas and potato khorma, where, khorma is transliteration from Hindi	Uses personal pronoun 'I' hence no imperative voice	Pour, add, light golden colour, use, mix, liquid consistency	Step by step	Simple house backdrop
Bhat	Potato peas Kurma transliteration from Tamil to English	Tone is like ordering the people, eg. You put, you pour. He describes the dish as human. Eg.: This dish is the worst thing that will attract others. Use a few words which do not have meaning. He takes ingredients as addressing humans and uses second person, sings songs.	Tasty, rough chop, beautifully cooked, drops of oil floating, describes the dish as a human.	Step by step	A place from his workplace
Ranveer	Mom's style aloo matar, additionally four names given, one in Hindi and other in	Uses 'you,' have to listen to the music and teaches as if the audience are in the same	Medium, dice, cut, do, clean, taste, paste, dice, check,	Step by step	Place of YouTube cooking is set like a house kitchen. Every ingredient name is

	transliteration and the other in English alone.	place Eg. ‘You have to peel.’ He said ingredients to be his friend, Praises himself that he does the best peas potato masala, as if he is talking to a friend. Said, cooking should be done with love, he said potato and peas are smiling.	lots of, masterpiece.		added to the video in bilingual form.
Kunal	Thumbnail of the video was mummy’s special aloo matar recipe, only one additional name in Hindi	Uses ‘my,’ our potato, he orders to whistle the cooker in a friendly manner.	Thick wedges, 30 seconds of sauté, fresh puree, good, sourness, evenly browned, perfect, roast, grate, oozing out	Step by step and he tells out very specific details of how to cut the vegetables	A poshed house kitchen setup. In the video ingredients name appears in bilingual form both in Hindi and English with measurements.

**Table 1 psychosemantic and episodic memory**

From Table 1, it is found that all the chefs follow the step-by-step explanation for the dish preparation. It also shows the language style and structure and frame of the four chefs, Damu, Bhat, Ranveer and Kunal. In the videos of potato curry preparation, all the chefs use English in parallel with their regional languages such that Damu and Bhat use Tamil whereas Ranveer and Kunal use Hindi. However, it has been inferred that Damu is conversing in personal tone, Bhat commands, Ranveer in conversational, emotional and Kunal in a precise form. The kitchen they use is either domestic or workplace.

Semantic memory was significant in all four demonstration videos, stressing the importance of consistency when preparing and consuming the dish. In context with this memory, it can be clarified whether to use non-stick cookware, how to correctly grind curry paste, serving size for additional guests, etc. In the video, Bhat attaches importance to side dishes and Kunal attaches importance to the suitability of curry to mealtime.

As Ranveer and Kunal display kitchen diaries of their respective mothers’ recipes, there are insights about episodic memory, which their mutual friend possess. Ranveer explains his mother’s aesthetic of the dish and even packed a quantity to take home for his mother. He nostalgically refers to the role of ghee that plays in Punjabi households especially on Sunday, by remembering his childhood. Kunal recalls as a child of having the potato curry and how it brings back happy memories and a sense of homecoming. Both chefs credit their mothers to the potato curry they have made.

The inferences on the cooking videos about psychosemantic and episodic memory are given Table 2 for the

dish named kadai paneer by the chefs.

**Table 2. Kadai paneer preparation**

<b>Chef</b>	<b>Dish name</b>	<b>Tone</b>	<b>Technical verbs and adjectives</b>	<b>Structure</b>	<b>Semiotic phase</b>
Damu	Kadai paneer gravy, Transliteration in Tamil is given	Tells about himself, eg. Our chef Damu uses I am adding salt, water. His tone in this video was like taking lesson to the students in a friendly manner	Pale brown, thick gravy, crispy brown, whey water, weight, stain, fresh, crushed, ripe, mash, break good taste, beautifully turns into a gravy, grate, awesome	Step by step	A part of his own house is taken for the cooking, 'Chef Damu' his name appeared for full length of the video
Bhat	Kadai paneer	He delivers ingredients names as if he introduces his friends, said will put all of them together to grind. Few meaningless sounds he produces when he adds the powder which is assigned to his happiness.	Indulge, highest selling, hotel style, dry roast powder, green, pale brown, toss, chopped, translucent, tri colour, boil, crunchy, sprinkle, mix, juicy, love it, fast selling	Step by step	A place from his workplace. The dish is very appealing to the eyes because of the colour
Ranveer	Kadhai paneer recipe was a transliteration from Hindi to English, other two names were the delicious kadai paneer and easy kadai paneer at home given in English	Tone was like speaking to somebody who is with him during the cooking. Example: let's chop, first person narrative I am, for me this is enough	Too hungry, good recipe, do not scroll, shallow fry, spice, colour, powdered, luke warm, light brown, important part, tempering, smash puree, deep fry, nice finish, important part, roast, stir fry, medium roast, saute vegetables, optional, pass try	Step by step	Place of YouTube cooking is set like a house kitchen. Every ingredient name is added to the video in bilingual form. Starts the video with pre heating the oil

Kunal	Restaurant style kadhai paneer and the same name is translated in Hindi	Simple and polite form	Fusion food, basic recipe, master, improvise, cherish, stir, continuously, even heat, perfect colour, little brown, lovely aroma, roasted, cooked off, basic masala, dash of oil, dried, quick stir, fry, quick toss, thickness, together taste, gently, do not rush, done	Step by step	A poshed house kitchen setup. In the video ingredients name appears in bilingual form both in Hindi and English with measurements.
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**Table 2 psychosemantic and episodic memory**

From Table 2, it is found that all the chefs follow the step-by-step explanation for the dish preparation. It also shows the language style and structure and frame of the four chefs, Damu, Bhat, Ranveer and Kunal. In the videos of kadai paneer preparation, all the chefs use English in parallel with their regional languages such that Damu and Bhat use Tamil whereas Ranveer and Kunal use Hindi. However, it has been inferred that Damu is conversing in the personal tone, Bhat commands, Ranveer in conversational, emotional and Kunal in a precise form. The kitchen they use is either domestic or workplace.

Damu in his YouTube video, explores semantic memory by showing people how paneer is made of and the different recipes that are prepared using it as an ingredient. He describes the steps to make a sweet dish named rasamalai. He also explains the preparation of tasty gravy named kadai paneer and how it pairs with few main courses such as naan, roti, pulao, chapathi and poori. He also observes how grating paneer will get more flavor. Bhat emphasizes roasting of each ingredient separately and clarifies that the end product is to be coarse, to make the dish tastier.

Ranveer explains the meaning of the name ‘kadai paneer’ and tells how the cookware makes a difference in the cooking time and thereby the consistency and taste of gravy. Kunal explores how the kadai paneer has evolved from meat-based preparations that ancestors made to the paneer and how the ingredients in the dish had to be chosen in correct proportions.

It is inferred that the dish is close to Ranveer’s heart to resonate him in a way that elaborated on the lingering feeling of nostalgia. He praises Punjab cooking masala as an essential component of the dish and shares a useful tip for making the dish like restaurant-style.

The inferences on the cooking videos about psychosemantic and episodic memory are given Table 3 for the dish named kozhukattai/modak by the chefs.

**Table 3 Kozhukattai/ Modak preparation**

Chef	Dish name	Imperative tone	Technical verbs and adjectives	Structure	Semiotic phase
Damu	Vinayakar Chaturthi special kozhukattai varieties, other name was in Tamil – poorna kozhukattai	This dish is like teaching a student (taught this dish to a woman)	Soak, dry, grind, sweet special, equal, saute, fry, pop up, cool down, grind, aromatic, tight balls, boil, mix, melt, ready, too soft, best dish	Step by step	Video started with Lord Ganesh's idol and in side popped up 'learn from the legend chef Damu'
Bhat	Venkatesh Bhat makes kozhukattai, other names were Kozhukattai in Tamil and sweet modak	Imperative  He makes few sounds and said let him (modak) be in flame	Simple, stuff, stick well, half-moon shape, easy, fantastic, celebrate, authentic, melted already, light brown, yellow colour, texture, taste, best consistency, lavish sprinkle, thick, grated, mix well, soft as a cotton, molish, lumps, toss	Step by step	A place from his workplace.
Ranveer	Ukadiche modak Ganesh Chaturthi special, chocolate modak	In this dish he cooks with one of his friends and the tone is like conversing with a friend	Cut, chopping, love, roast, stir, quick, richness	Step by step	Cooks from his house kitchen
Kunal	Modak for Lord Ganesh in Hindi, modak without mould, ukadiche instant modak	Talks like he is having a conversation with somebody with him in the video. Example: our modak is ready, come on let's plate	Classic, stuffing, delicious, fresh, perfectly fine, brilliant combination, good, melting, cool it, gentle mix, absorb, knead, well, upwards, below, side, push, cover, press, time's up, time to reveal, fast, tight, richness, little clarity, done	Step by step	A poshed house kitchen setup.

**Table 3 psychosemantic and episodic memory**

From Table 3, it is found that all the chefs follow the step-by-step explanation for the dish preparation. It also shows the language style and structure and frame of the four chefs, Damu, Bhat, Ranveer and Kunal. In the

videos of kozhukattai/modak preparation, all the chefs use English in parallel with their regional languages such that Damu and Bhat use Tamil whereas Ranveer and Kunal use Hindi. However, it has been inferred that Damu is conversing in the personal tone, Bhat commands, Ranveer in conversational, emotional and Kunal in a precise form. The kitchen they use is either domestic or workplace.

Damu’s semantic memories of kozhukattai recipe include soaking rice, drying it using a fan, and continuing the grinding experience. On considering this sweet dish, one would still want salt to enhance the flavor. To prepare this lip-smacking item, it is very important to measure rice and water in correct proportions and to ensure that there is no single lump in the dough. A major point at which the dough is to be prepared correctly that it holds together but does not stick on the fingers. It is interesting that Bhat’s semantic memory also seems to reflect that of Damu, as he also emphasizes the ratio of rice and water.

Bhat suggests to obtain a perfect soft texture. Ranveer brings a fresh twist to the table by recommending a technique in which one can fold the corners of the rolled dough using a small amount of water. He shows his creativity with a chocolate modak that has a delightful Indian touch. Meanwhile, Kunal explores some recent alternatives for modaks, such as those made from crushed biscuits. He emphasizes the importance of achieving a halwa-like consistency when mixing with milk and even throws in a surprising tip: adding a pinch of salt to the traditional model for an extra burst of flavor.

In episodic memory, Damu recommends to add sesame oil to enrich the flavor. When making rice balls, he points out that oiling the hands is essential to avoid breakage of the dish. He highlights the importance of using banana leaves for shaping, boiling water for steaming, and incorporating oil into the jaggery mixture to prevent it from sticking to the pan. On the other hand, Bhat offers a different perspective from his own memories, describing how he kneads dough in a heavy iron vessel with hot water to help shape balls.

Ranveer opens up his cherished tradition of making modak for his yearly celebration with the beloved deity Ganesh. He shares some handy tips, such as adding milk to soften the dough and using a semi - bowl for kneading to keep it cool. Meanwhile, Kunal fondly recalls his love for modak, which he enjoys sharing with the Lord Ganesh. He also pointed out the variety of ingredients that people like to use, including poppy seeds and dry fruits. Kunal stressed the importance of using ghee to keep the dough from sticking and suggested a careful technique similar to shaping parathas by hand, which results a perfect bag-like shape.

The inferences on the cooking videos about psychosemantic and episodic memory are given Table 4 for the dish named white sauce pasta by the chefs.

**Table 4 Whit sauce pasta preparation**

<b>Chef</b>	<b>Dish name</b>	<b>Imperative tone</b>	<b>Technical verbs and adjectives</b>	<b>Structure</b>	<b>Semiotic phase</b>
Damu	Sauce pasta, saucy pasta (transliteration in Tamil)	Teaches to a kid. More of instructive	Add, mix, nice smell, juicy, saucy, lovely, fantastic	Step by step	Cooks in a television studio, shows

		form			the end product in the beginning
Bhat	White sauce pasta, white pasta	Uses personal pronoun 'I'	Teach, prepare, sand consistency, saucy consistency, roasted, translucent consistency, toss well, fantastic, enjoy	Step by step	Cooks in his restaurant
Ranveer	Cheese sauce pasta, creamy cheese pasta in house (transliteration in Hindi)	Uses personal pronoun 'I'	Creamy, foamy, gultinizing, cloudy, glaze, tempting	Step by step	Cooks in kitchen setup
Kunal	Pasta in white sauce, white sauce pasta, Indian style white cheese sauce pasta recipe	Uses personal pronoun 'I'	Light brown, frothy, clumpy, gooe, mashy, thick, watery, perfectly done	Step by step	Open kitchen with plants decorated on the sides.

**Table 4 psychosemantic and episodic memory**

From Table 4, it is found that all the chefs follow the step-by-step explanation for the dish preparation. It also shows the language style and structure and frame of the four chefs, Damu, Bhat, Ranveer and Kunal. In the

videos of white sauce pasta preparation, all the chefs use English in parallel with their regional languages such that Damu and Bhat use Tamil whereas Ranveer and Kunal use Hindi. However, it has been inferred that Damu is conversing like a tutee, Bhat, Ranveer, and Kunal use “I” in a precise form. The kitchen they use is either domestic or workplace and their demonstration is in a step-by-step manner.

Damu remembers the wonderful days of his teaching the children about the preparation of meals. He highlighted the importance of stirring the sauce at low temperature to avoid overheating. Bhat highlighted the fact that there are numerous types of pastas, he also pointed out that parmesan cheese is essential for giving an Italian flavor to the dish. His favorite sauce, Béchamel, becomes more delectable when it is stuffed with an onion and cloves. One has to ensure that the sauce remains completely smooth with no lumps when adding flour as it has to be blended well to transform into a thick creamy sauce to be mixed with pasta. In addition, bay leaves are a great source of seasoning. Bhat and Ranveer said that spaghetti is served with a sauce in Italy, whereas it is the reversed in India. When cooking Italian dishes, white wine is added with ingredients.

Ranveer recommended that the preparation of sauce is easy, and replacing butter with oil and normal milk with plant-based milk. He insisted on using healthy substitutes, such as semolina pasta, rather than white pasta. The addition of corn kernels is beneficial for cheese, and pasta-water can be used to intensify the flavor. For Indianized flavor, coriander leaves and green chilies are to be added in the pasta. Kunal says that Indians have been adapted to the taste of pasta, even though it is an Italian dish. For better taste, garlic is added for its aroma, and milk at room temperature so that it mixes well. He explores the history of pasta and how it traces back to Chinese noodles that grew over time to become spaghetti and other pasta varieties. The thickness of the sauce depends on the amount of refined flour added. It is recommended by him to mix the cooked pasta immediately with the sauce.

In the case of Damu’s episodic memories, he warns against eating pasta regularly, showing a sense of responsibility towards encouraging healthy eating habits.

## **Conclusion**

The key findings of the study indicate that chefs employ bilingualism in their videos so that they are able to demonstrate to heterogeneous audience. This facilitates the audience of heterogeneous linguistic backgrounds to comprehend the content either by employing English or by using the semiotic cues embedded in the videos. The selection of YouTube as the primary platform for the study presents a potential bias due to its widespread global outreach. The application of bilingual functionalities in videos assists people from heterogeneous linguistic backgrounds, as it enhances their comprehension of the instructions provided. The application of closed captions in videos assists audience in keeping pace with other languages. The application of semiotic design implemented in the videos presents information regarding the cognitive processes of the audience, so that there is a better understanding of their engagement with the content. The application of psychosemantic and episodic memory becomes more significant in the identification of a dish, prepared by each chef, delineating small differences in the cooking process as well as the names of dishes.

There is also a potential for this study to be extended further by translating the videos and performing linguistic analysis, thereby improving the level of understanding of the content. Apart from mere observation of chefs’ moves, a study based on a questionnaire can further investigate the psychological effects of videos on viewers. YouTube videos are a great source for information about the dishes and the method of cooking, and hence become a complement to the learning process. Bilingual discourse analysis of videos depends on semantic and

episodic memory revealing higher levels of meaning in content. In the technology-inclined world that people currently inhabit, even remote locations have been reached by the advancement of technology, and now learning is easier due to the arrival of digital media like YouTube, which provide high levels of addressing different learning needs. The main difference between YouTube and traditional discourse analysis is the information given, where books concentrate on ingredients and recipes only, whereas videos provide a treasure trove of supplementary information depending on semantic and episodic memory. Hence, this article focused on cooking videos of individual chefs available on YouTube.

Through semiotic discourse analysis, viewers understand the various preparation steps of a dish. The usage of English in parallel with the widely used terms of Tamil or Hindi along with English subtitles within the cooking videos also makes the content more effective, inclusive and accessible, so that people are able to comprehend.

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Revathi V C (Conceptualization, formal analysis, investigation, methodology, resources, visualization, writing – original draft).

Sneha Mishra (Supervision, validation, visualization, writing – review & editing).

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