Learning to cook like mom

How young Indian girls learn family culinary traditions

Vishakha Parvate, Sandy Speicher
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“Who wants to cook Aloo Gobi when you can bend a ball like Beckham?”
Jess, 19, in conversation with her mother about a traditional Indian meal

Introduction
Parminder Nagra plays a 19-year old British Indian girl (Jess) in the movie “Bend it Like Beckham.” Her mother does not understand her passion for football and wants her to learn how to cook a full Punjabi meal as a precursor to a “good marriage.” This is a very common situation in homes of Indian heritage.

As they reach puberty, Indian girls begin the process of learning how to cook so that they can eventually manage the business of the kitchen in their family’s tradition when they get married, typically around the age of 20. This process involves many specific skills that build upon each other over a long period of time.

This training enters a new phase after marriage when the new bride spends time with her mother-in-law, being immersed in the culinary traditions of her husband’s family. The idea is to refine her cooking skills to better fit in with the existing framework.

Learning problem
Having watched their mother prepare meals all their lives, young girls are brought into the family cooking traditions. Their knowledge as they begin the training is based on unstructured observation of their mothers, and abilities to identify tools and ingredients. The girls do not yet possess the skills to complete a full Indian meal.

Learning environment
Culturally in India, cooking is as much a part of life as eating. It is expected that a girl acquires these skills. For the first phase of learning, the environment is in the daughter’s family home. The mother and daughter interact along with siblings that
may be in different stages of development. All may be working together simultaneously in the kitchen.

The second phase of learning happens in the home of the girls' husband. She marries into a family, often moving in with them, in order to ensure that her skills match those required to maintain and propagate the groom’s family traditions.

Both environments include opportunities for feedback, often in the form of hungry, critical, family members.

**Design principles**
In this study, we propose to examine the transmission of skills and specific techniques in a family culinary environment. We feel that this lends itself very naturally to a behaviorist perspective. We have identified three main principles to help design our study.

*Putting in place of prerequisite skills*
In India, children spend time in the kitchen as their way of interacting with a mother who might otherwise be too busy to be able to sit and play with them. The daughters thus absorb much of their prerequisite skills by just soaking in the atmosphere. They come into this business of learning how to cook with a set of prerequisite skills. Mothers very effectively use routine activity as a method of transmission and consolidation of different skills.

*Clear goal: a full Indian meal (with lots of feedback along the way!)*
The aim of most mothers when they begin to teach their daughters how to cook is “to be able to cook a full [Punjabi] meal: vegetarian and non-vegetarian!” (as quoted from the movie “Bend it Like Beckham.”) Indian mothers have in place very clear feedback mechanisms in the form of immediate validation or criticism of a skill learned. Reinforcement is in the form of subtle and sometimes not-so-subtle comments on the daughter’s ability to perform in the kitchen.

*Putting it all together...over many years and in many phases of learning*
The ability to put an entire meal together is a skill that takes many years to acquire. Along the way, the mother uses the prerequisite skills her daughters possess by introducing pre-cooking skills and then following them up by teaching component skills needed to put together a full meal. This ‘component-to-composite’ aspect is very amenable to the behaviorist perspective as the daughters learn various individual skills and then are explicitly taught how to put it all together.
Anticipated findings
While this study seeks to identify the skills required to cook a full Indian meal and the sequence with which they are thought, we begin our research with a potential learning hierarchy based on our existing knowledge as reference. This estimated process will be used as input to our observation and interviews, and will be modified based on the research process.
It assumes existing knowledge in the daughters as follows:

- Ability to identify cooking tools such as a knife, pots and pans
- Ability to identify raw ingredients such as vegetables, grains, spices and meats
- Language competence (including cooking terminology)

The overall process we are assuming contains 13 levels of learning, as shown in the diagram on the following page.
<table>
<thead>
<tr>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>L4</th>
<th>L5</th>
<th>L6</th>
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<th>L10</th>
<th>L11</th>
<th>L12</th>
<th>L13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify quality of ingredients</td>
<td>How to shop for ingredients</td>
<td>Gather food for cooking</td>
<td>Boiling water</td>
<td>Rice</td>
<td>Sautéeing</td>
<td>Customize cooking techniques</td>
<td>Following a recipe</td>
<td>Refine tasting skills for specific</td>
<td>Entrees</td>
<td>Multiple dishes at once</td>
<td>Prepare full Indian meal</td>
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</tr>
<tr>
<td>Identify cost of raw ingredients</td>
<td>Identify market for shopping</td>
<td>Prepare food for cooking</td>
<td>Frying</td>
<td>Tea</td>
<td>Steaming</td>
<td>Boiling</td>
<td></td>
<td></td>
<td>Salads</td>
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</tr>
<tr>
<td>Identify market for shopping</td>
<td>How/where to store ingredients</td>
<td>Gather tools for cooking (knife, pots,</td>
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Proposed Study
Our study includes 3 phases, although the focus of this proposal is specifically around the first phase of research. The objective of the first phase is to identify the skills required to cook a full Indian meal and the sequence with which they are taught. The proposed learning hierarchy will then be revised based on the results of the study’s first phase. We will then go into the second phase, where we will seek to identify the skills required for successful transference into the new family’s cooking traditions. From this, we will generate design solutions, with which we will use in the third round of research in order to test its effectiveness.

Our first phase of research includes two major studies.

1. Interviews with mothers
We will begin by interviewing 15 mothers to find out the skills and sequences they believe they are teaching their daughters. Essentially, we will ask them to articulate their method of teaching cooking skills. The group will be divided into mothers representing various stages of teaching: 5 with young girls (ages 8-12), 5 with daughters who are in the middle of their training (ages 13-18), and 5 mothers with daughters who have just been married and have mastered the goal of cooking a full Indian meal.

The interview will be conducted one-on-one with questions as follows:
- At this point, what does your daughter know in terms of how to cook?
- What is the first step you taught her, and what skills are embedded in that task? Please list this information for all steps you have already taught her.
- What does she still need to know? And in what order will you teach her those skills?
- What is the end goal?

We will ask the mother to write down the steps of learning, either as a visual diagram or as a text-based list, focusing on the skills and tasks she is teaching.

2. Observations in homes
Since learning to cook a full Indian meal often happens over a significant amount of time (approximately 10 years of a girl’s life), it is not practical for our study to observe the learning process of one particular girl in its entirety. Our study will include observations in the home for 5 key stages in our estimated learning hierarchy defined earlier in this proposal. Observation will include participant-observers who may ask questions to clarify their interpretation, but are directed to note the skills that are being practiced, the stimulus used to create new skills, the sequence of the skills being taught, and feedback mechanisms. We will observe 3 mother/daughter pairs (for a total of 15 pairs) in each of the following stages.

L2: Learning the spaces where ingredients live
This observation will include shadowing mother/daughter pairs in the grocery store while shopping for ingredients and then at home when they are putting them away.
**L5: Learning the effects of ingredients**  
Observation will happen in the mother’s kitchen, focusing on the methods she uses to explain the skills of identifying proper tastes, and the feedback mechanisms she introduces to her daughter.

**L6: Learning simple preparation: process-based dishes**  
Optimally, this observation will happen the first time the daughter is asked to create simple dishes herself. We will focus our observation on identifying the skills she uses to prepare for and complete the acts of making rice and tea. We will also note the types feedback the daughter receives from her mother and other family members.

**L8: Learning to customize techniques for different foods.**  
This will include observation of the advanced cooking techniques learned earlier in the process, but focuses on how the refinement of those skills are taught for different situations.

**L12: Learning to put it all together**  
Our final in-situ observation will be of the second-to-last stage of learning. This is so we can see the accumulation of all skills being implemented in full complexity, with emphasis on the final skill of chaining it all together.

**Follow-up Studies**  
As mentioned previously, our proposal is for the first phase of research, however we anticipate designing two phases to immediately follow.

The second phase of research would focus on the Indian girls’ second phase of learning... the transition into her husband’s family cooking traditions. It would seek to identify the skills that are foundational in order to learn a new way of cooking, and also to identify the new skills that would need to be learned.

We anticipate finding that levels 1–9 on our proposed hierarchy are essential prerequisites for successful transference of their cooking skills. We imagine that the skill of learning to evaluate success (L10) would need to be expanded to identify new, specific tastes such as spices and flavorings.

The analysis of the first phase will be input to the design of the protocol for the second phase, but at this point, we imagine conducting a similar study to Phase 1, including:

– Interviews with mother-in-laws to identify their process of teaching and the skills they focus on, and

– Observations in-situ of just married Indian girl with her new mother-in-law, concentrating on the identification of new skills, existing skills that are to be expanded, the sequence with which they are taught, and the feedback mechanisms provided.
Based on these two phases of research, we will generate new design solutions. As Phase 3 of our research, we will then conduct an evaluation study of the effectiveness of the new solution.

**Potential design solutions**
Although this learning process has been validated by generations of mothers and daughters, we still see potential to modify the design in certain areas. There appear to be two main areas that the current pedagogy may not address:

*Empowerment of the daughter to cook independent of a family environment*
Since the learning and the subsequent use of the cooking skill happen in a family environment, oftentimes the daughters are at a loss when they have to cook by themselves. They are used to functioning in circumstances that are scaffolded by external feedback and reinforcement. We recommend that the curriculum be decoupled from the environment to enable the daughter to transfer her cooking skills.

*Ease of transmission outside of the particular culinary tradition*
This is related to the earlier point in that the methods currently being used make it hard to transmit these skills with people outside of this culinary tradition. The learning happens in an environment laden with specific idioms and depends heavily on the routine practice of the component skills. It also relies on the fact that the final goal is to be achieved over a course of almost a decade. A formalization of the language to be more universal may help, (especially in terms of measurement) and to not assume certain skills as obviously present. We recommend that the component-to-composite cycle be presentable in a shorter time frame to enable transference outside of this particular situation of mother to daughter.

It is also possible that these studies may reveal a change in the environment with which these skills are being taught. Distracted, busy lives may be affecting both the ability of mothers to teach and daughters to learn. Our research may reveal a need for a codification of this tradition in order to sustain the cooking procedures. We envisage this tradition to continue and empower many more generations of girls to cook, and believe that a formal articulation of the process will help make that possible.

**References**