

Full Length Research

Identifying the retention of examples when converting learning into a meaningful and permanent knowledge

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The purpose of this study is to ascertain which of the examples the teacher use in teaching are retained by teacher candidates while making learning permanent and meaningful. One of the qualitative research methods, phenomenological approach is used in this study. This research has been carried out with a total of 18 English language prospective teachers attending PPSE (Public Personnel Selection Examination) courses in a private teaching institution in Isparta (Turkey) in 2014-2015 academic year, on voluntary base. Participants have been lectured 120 hours Educational sciences course throughout 4 months by the researchers. Afterwards, an interview has been carried out with them. The data were obtained through "Semi-Structured Interview Form" consisting of open-ended questions developed by the researchers. First the data were computerized then they were analyzed by using content analysis of qualitative research techniques. When considering the findings, as a result of the responses the participants gave in one on one interview, examples associated to irrelevant cases (n=49) are kept in mind most after 120 hours period of education. In addition, it has been observed that examples close to their real meanings (n=31), and the ones given with proverbs and aphorisms (n=42) have been found to be much permanent in the mind. The results indicate that according to the answers given by English language prospective teachers, using unnatural and interesting connotations in making knowledge meaningful and permanent makes it easier to recall.

Key words: Meaningful learning, Semantic connotation, Retention, Exempling, ELT prospective teacher

INTRODUCTION

As a result of the studies, memory and retention are seen as the most important problems faced by individuals (Korkmaz and Mahiroğlu, 2007). No matter how old people are they have the potential memory to remember most of the things (Çomak, 2003). Without memory, neither it could be possible to learn from our experiences nor could language and the other developments that distinguish human being from the other species occur (Baltaş, 2001: 101).

Beyond the things what we have learnt, it has been understood that billions of data that we do not care and notice consciously everyday settle somewhere in the abyss of our memory and have never been removed from

there (Baran, 2004: 63; Fender, 1998). For this reason, we should avoid the misperception that we forget the knowledge, instead we need to perceive it as we are having difficulty in recalling and restoring things.

Facilitating restoration and recalling depend on the individuals' ability to establish a call with the knowledge. We may have less difficulty when we store knowledge if we produce unrealistic, interesting and ridiculous mental images and try to envision connotations clearly with great extent of scope (Yetkin, 2006; Saygın *et al.*, 2004: 51-52).

Andreasen (2009: 91) portrays the connotation area in the brain as the structure getting knowledge from senses and the other areas of the brain and-potentially in new ways connects them each other. Connotative significance is explained with what the newly learnt knowledge reminds us in our mind (Ari, 2005). Because each concept is recognized and remembered with the images and connotations that they are related (Karadüz, 2003).

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Giving meaning is to establish a call of the new information in the working memory with the pre-existing information in the long-term memory (Ulusoy *et al.*, 2006, Senemoğlu, 2011). The case what we call as meaningful learning is the process to store and encode new knowledge to the long-term memory by associating with the old ones in the learners' minds. In this strategy, individuals are expected not to receive the knowledge as it is rather, they should store it and generate new meanings by integrating it with the existing ones (Demirel, 2008).

Information processing is the theory that explains meaningful and permanent learning. This theory focuses on receiving, processing, storing and recalling the information when necessary (Mayer, 2008). Basically information processing theory; has been interested in how to retrieve information from the environment, how to process new information, how to store information and how to recall it (Senemoğlu, 2011). In this regard, working (short-term memory) plays an important role in recalling the knowledge. Working memory keeps the information in the short-term memory then associates it to the new ones and finally rearranges it (Aydın *et al.*, 2005: 218). The basic principle of recalling and restoring the knowledge is effective encoding. Hence, useful coding is possible only through giving meaning to the knowledge.

According to Eggen and Kauchak (1992) while encoding; efficiency, organization, articulation and mnemonic devices should be utilized to make the knowledge meaningful (cited in: Ulusoy *et al.*, 2006). Bellezza (1981) defines the mnemonic devices as, "encoding and/or organization strategies that are used to make it easier to generalize the knowledge" (cited: Açıkgöz, 2003:311). Fundamental duty of the mnemonic devices is to ensure new information to integrate with the available information in the long-term memory (Mastropieri and Scruggs, 1998). And this decreases the rate of forgetting and makes it easier to remember (Scruggs, Mastropieri and McDuffie, 2007; Brazley, 2008; Göl, 2009; Çalık, Ayas and Coll, 2009; Kırdoğan, 2010).

Most of the conducted studies demonstrate that using mnemonic devices and unnatural ways of learning increase success and motivate individuals towards learning (Senemoğlu, 2011; Smith, Richards and Cook 2010; Kirk, 2003; Irish, 2002; Hsu, 1999; Delosh, 1996; Purnell and Solman, 1991). Therefore, the aim of modern education is no longer to present available information to the students but rather it is believed that students are expected to internalize the knowledge subjectively involving in the learning process and the conditions allowing the students to remember the information easily by creating meaningful learning is to be built (Fidan and Erden, 1998).

Aim of the study

This study needs to be carried out after the difficulties

experienced by the individuals when recalling knowledge have been observed by the researchers. Students sometimes have difficulty in recalling the information although they take an active role in the learning process. At this point, the person in teaching position takes a significant role. This role is to present the new knowledge based on his/her own experience to the learners by associating it to the life or the previous information. In this way, students will both learn the new information more easily and recall it without difficulty.

The main subject addressed in this study is the availability of the examples and information obtained mostly in the learning environment. Through unnatural connotations and interesting examples that they create on their own, teachers will contribute to the students to build meaningful and permanent learning. This will make contribution to recalling and restoring the knowledge. Besides, the connotations established to restore the information will facilitate the process. Therefore, the purpose of conducting this study is to ascertain which of the examples the teacher use in teaching are kept in mind by teacher candidates while making learning permanent and meaningful.

METHODS

Research Design

One of the qualitative research methods, phenomenological approach is used in this study. Phenomenological studies focus on the cases that we are aware of but do not have in-depth and detailed understanding (Büyükoztürk *et al.*, 2011: 19). Although the individuals grow up in the same environment, the ways they understand and interpret the events are different. Phenomenological research deals with what people perceive as phenomena they encounter in the universe where they live, what they understand and what are the experiences they have. The purpose of the phenomenological study is to identify the different ways that the people introduce to experience a certain aspects of a phenomenon, to interpret, understand and conceptualize it (Çepni 2010, Ashworth and Lucas, 1998).

Research sample

This research has been carried out with a total of 18 English language prospective teachers attending PPSE (Public Personnel Selection Examination) courses in a private teaching institution in Isparta (Turkey) in 2014-2015 academic year, on voluntary base. When determining the sample, purposeful sampling is decided to be applied. To do in-depth research, within the scope of this study, this sampling is used to select knowledge-rich cases (Büyükoztürk *et al.*, 2011). Based on the

Table 1. Personal data of the participants.

Gender	Male		Female
	8		10
Place	City Centre		District
	12		6
Age	20-24	25-29	30 and over
	5	11	2

availability of the students involved in the sample group, purposeful sampling is preferred in the current study. This research has been carried out on voluntary base; the identities of the participants are kept confidential. Personal data of the participants are shown in Table 1 in detail.

Data collection

The data were obtained through “Semi-Structured Interview Form” consisting of open-ended questions developed by the researchers. In this technique, the researchers have prepared an interview protocol including the questions they plan to ask in advance.

Semi-structured interview that has a certain level of standardization and flexibility is seen more appropriate technique in educational science studies (Ekiz, 2003). In the preparation of the form, primarily the relevant literature has been reviewed and in line with the obtained data, interview questions are created for pre-application purposes. Expert view of three assistant professors on interview form is applied and the recent form is shaped in the light of their feedback. Semi-structured interview form consists of questions aiming to determine which examples are kept in mind most in Educational sciences course after the English language prospective teachers get 120-hours education.

As the reliability is a main problem in qualitative research, researchers have taken various measures to improve the reliability. It is supposed to explain how to use the current strategy clearly and allow other researchers to use it in a similar way (Silverman, 2000; Yıldırım and Şimşek, 2011). Researchers tried to improve external reliability of the present study by reporting the steps they follow in detail; and internal reliability is tried to be provided by pursuing a goal to convince the readers in research results with their own perspectives (Türnüklü, 2001; Robson, 1999). Besides, the researchers improve the internal reliability significantly by giving some parts of findings as they are.

Data analysis

The data were analyzed by the researchers by using

content analysis of qualitative research techniques. The purpose of content analysis is to reach the concepts and relationships in order to explain the obtained data (Yıldırım and Şimşek, 2011). In content analysis, the data are analyzed in four stages. These are; encoding of the data, finding the themes, arrangement of codes and themes, identification and interpretation of findings. In the phase of encoding the data, researchers try to find out what each part means conceptually by examining the obtained data and categorizing them into meaningful sections. In the phase of finding the themes, codes are combined and analyzed. Researchers have attempted to find common points between the codes. Then, codes are categorized and a system is created to arrange the obtained data. In the last phase, the researchers arranged and interpret the data in accordance with this system (Yıldırım and Şimşek, 2011).

FINDINGS

In this study which is based on one to one interviews aiming to determine which examples are retained most in Educational sciences course after the English language prospective teachers get 120-hours education, following findings are reached when the answers given by teacher candidates are examined.

Table 2 demonstrates the numbers and classifications of the examples which are kept in mind most in Educational sciences course after the English language prospective teachers get 120-hours education. As seen in the table, it has been identified that (establishing unnatural connotations) examples associated to irrelevant cases (n=49) are retained most. This case indicates that using unnatural connotations of mnemonic devices facilitates the recalling of the information and makes significant contributions to restoring it while conveying the knowledge from short-term memory to long-term memory. To make the information meaningful and permanent, teachers are required to give interesting examples and unnatural connotations when teaching to the students.

In Table 3, examples retained to memory and associated to 49 kinds of irrelevant cases that are remembered by 18 English language prospective teachers are presented. Sometimes it is not adequate to

Table 2. Classifications of the examples retained to memory most based on the answers given by the teacher candidates.

Types of the examples	Frequency
Examples associated to irrelevant cases	49
Examples close to their real meanings	31
Examples given with proverbs and aphorisms	42

Table 3. Findings consisting examples retained to memory that are associated to irrelevant cases.

Target topic	Counter Example
Positive correlation	*So many salawat so many houri (contains religious terms)
Isolation period against proximity	Even Nescafe is 3 in 1, I'm still alone
Kolb's learning style	Concrete learning style is the girls and abstract learning style is the boys
Oscillation effect	*People cannot 'break wind' everywhere ('oscillation' is associated here with 'break wind')
Dalton plan	*My name is Elvan DALTON, I wander around one BALCONY to another (a famous saying in Turkish 'Dalton' and 'Balcony' are pronounced similarly)
Difference between idealism and realism	Idealism, Girls find the man they love handsome; Realism, Boys love pretty girls
Difference between predictive validity and concurrent validity	Boys pay attention to the concurrent validity of the girls, and girls takes the predictive validity of the boys into consideration
High-level conditioning	When you are with your darling, do not dare to look at her sister cross-eyed
Crespi	'Crispo' is an expensive player
Garcia effect	*Everything reminds me of you (a verse of a famous Turkish song)
Temporary conditioning	Time passes so fast
Behaviourism	*Ali de Veli de it de (Ali, Veli and the dog are all the same)
Self-efficacy	*Ambitious hamster demolishes the wall (Faith will move mountains)
Intellectualize	*Entel dantel konuşmak (Talk artsy-fartsy) ('entel' and 'dantel' are pronounced similarly in Turkish)
Embowering	*I chose you among the beautiful girls and give my heart only to you (a verse of a famous Turkish song)
Constructivism	It is not a patrimony, the child succeeds everything on his/her own
Programmed instruction	Skinner cooked Kebab in the cooking program
Response analogy	I will do it if the song 'Şiki şiki Baba' by Kemal Sunal plays (a famous comic song by Turkish famous actor Kemal Sunal)
Difference between Programmed instruction and Complete learning	Programmed instruction is like a horse-racing and Complete learning is like a camel train
Reliability-Validity relationship	Do the girls regard to the reliability or the validity of the boys?
Establish Rapport	Hot pizzas from Pasaport Pizza
Counter model	*Öğretmen öğrenciyi dövmekten canter içinde kaldı (Teacher sweat blood when beating his student ('counter' homophones 'blood-sweat' in Turkish)
Kounin model	*Kanuni mektup yazdı Avrupa' ya dalga dalga yayıldı. (Padishah Kanuni wrote a letter and it spread undulatorily ('Kounin' sounds like the 'Ottoman padishah "Kanuni" Süleyman the Magnificent' in Turkish.
Concession	You do not compensate for your mistake instead you escape 'concession concession'! (reduplication with the term itself)
Prevention	After you fall in love with a girl, you prevent yourself looking for others
Response generalization	Boys show strong interest in girls to hear nice words from them
Establish identification	My father is a man like 'Toyota' (a motto of an advertisement)
Live in an existential manner	Neither yesterday nor tomorrow 'today today!'
Turtle technique	Why do you evade the issues, are you wimp?
Shark technique	You just think for your food like a shark!

Table 3. Contd.

Oral stage	You'll be obese if you keep on eating so much, I wonder if you sucked your mother too much when you were baby
Anal stage	Do not behave so meticulously! I wonder if you were obstinate with your mother in the toilet when you are a child
Difference between direct and indirect measurement	There was no one in the class when I entered (direct) There was no manly man in the class when I entered (indirect)
Gagne's Conginitve development stages	*IUZSAKIP ('acronym' encoded with the initial letters)
Dale's stages	OBSOLETE GAMZE SUPPORTS GALATASARAY SO DOES TAHİR
Guthrie's methods to break habits	Guthrie wiped the bad habits
The stages of problem solving	Similar to the stages of love (First feel, recognize, and review the literature....)
Difference between problem solving and project	Marriage is comparable to project after having a baby
Difference between girls' and boys' reaching puberty	Girls reach and leave puberty earlier like lands, boys are like the sea
Cathexis	*Kars (a province in Turkey) is famous for its 'kete'. 'Kete' a kind of pastry sounds like the term 'Cathexis' in Turkish
Self-returning	Reappearance of a suppressed behaviour
Front organizers	Like appetizers before main dish
Syntechtic	It is irrelevant to compare love to Istanbul
Workshop	Hard-working women's making 'sarma' (a famous Turkish meal) together
Sandwich	Charity sale
Concept Map	It serves lots of benefits to everything other than death, like nigella
Mode	*Nerde çokluk orda modluk (Too many cooks spoil the broth) ('çokluk' and 'modluk' are pronounced similarly) in Turkish
The unique feature to be included in textbooks (to be interesting)	A good book is supposed to affect the readers and a beautiful girl is supposed to attract the boys
Keller's plan	Bolds are on one side, Blinds are on the other side ('Bolds' is homophone of 'Keller' in Turkish)

give examples close to their real meanings when learning information meaningfully and permanently. As long as the nature of knowledge allows us to describe it in different ways, there is no need to keep it in our mind as it is. When the learners first see the knowledge it should be learnt in relation to elements of humour. This will both motivate them towards learning and make it easier to recall the knowledge by being integrated with the subjective learning structure of the individuals. In this study, it has been observed that English language prospective teachers are both very willing to participate to the 120-hours Educational science course lectured by the researchers and after one to one interview it has been identified that they do not have much difficulty in recalling knowledge. In this context, unnatural examples with high-level semantic connotations (interesting and irrelevant) can be said to contribute to the persistence of learning in recalling the information.

In Table 4, 31 types of examples retained to memory close to their real meanings that are remembered by 18 English language prospective teachers are introduced. When we consider the examples given in Table 3, we can

say that it is not very effective to try to make the knowledge meaningful as it is. As the meaningful learning phenomenon can change depending on the living space and subjectivity of the individuals, connotation status of the knowledge may change as well. Since the meta-cognition and meaning attribution of the individuals differs (Gündüz, 2014) the information should not be always taught with its real meaning. In this current study, it can be said that examples associated to irrelevant cases (establishing unnatural connotations) are more effective in recalling the knowledge than those examples close to their real meanings.

In Table 5, 42 types of examples retained to memory given with proverbs and aphorisms that are remembered by 18 English language prospective teachers are shown. If we divide the recalling techniques into two as natural and unnatural techniques, proverbs and aphorisms can be included in the unnatural one (associated to irrelevant cases) due to the figurative and profound meaning they have. Recently, studies on the effectiveness of the proverbs in education have been carried out (Ocak and Gündüz, 2007). Yet, people have felt the need to use

Table 4. Findings consisting examples retained to memory that are close to their real meanings.

Target topic	Counter example
Commemorative (episodic) memory	Memories are now revived in my eyes.
Contrast in behavior	Counter-attacks
Reflecting	Do not reflect your feeling of guilty by throwing mud at me
Complete learning	Do the hard-working students have to wait for the lazy ones until they learn completely?
Id	*İtlık puştuluk peşinde (caked with dirt) ('it' means 'dog' in Turkish and sounds like 'id')
Stages of 5E model	The teacher makes the most explanation while explaining
Clarity	Is clarity clear enough?
Living space	Can I involve in your living space to understand you?
Mirror theory	We are the reflection of our society.
Techniques both detecting and eliminating misconception	<u>Concept</u> maps and <u>conceptual</u> caricature
Reflective thinking	Do not accept what I say everytime, just look with your critical eye
Difference between convergent and divergent thinking	The further you are, the greater my imagination is getting
Lateral thinking	We should think an event thoroughly
Jigsaw technique	You need to separate in order to reunite
Life-long learning	From cradle to grave
Distance learning	Now that there is a distance between us, it is pointless to come together
Demonstration	Show me so that I can do it
Effect facilitating the response	When the sheep in front of me jumps, it will be easier for me to react
Difference between Type I and Type II punishment	Exposed Type I, Deprived Type II
Superstitious behaviour	Do you believe that your team will gain the match if you wish totem for them? Leave this superstitious behaviour
Method of loci	He recognizes me from the lodge I sit
Fishbone technique	It is nice to eat fish but for its too much detail
Station technique	Aren't you tired of wandering around the stations?
Ego integrity versus despair	I wish I hadn't made that of mistake and got desperate
Egocentric thinking	You always put yourself into the centre and never think of us!
Phallic stage	Why don't you get married? I wonder if you are dwelled on Freud's phallic stage
Approach-approach conflict	Eat one's cake and have it too
Response compensation	Nothing comes without a price
Difference between getting used to and desensitization	Get used to smell and be desensitized to fear
Altruism	You may leave yourself but never will you leave your love
Cooperative learning	Don't race 'Kubaş' (another term similar to 'cooperative' in Turkish)

proverbs in some parts of their lives. Proverbs have been internalized by most the individuals in the society. In education, it is easier to explain the known cases instead of the unknown ones. Proverbs and aphorisms take significant place among the examples retained to the memory of English language prospective teachers. Therefore, we need to include proverbs in the learning environment to make the learning clear and comprehensible.

DISCUSSION, CONCLUSION and SUGGESTIONS

In this study aiming to ascertain which of the examples the teacher use in teaching are kept in mind by teacher candidates while making learning permanent and meaningful, following results have been reached in the lights of findings obtained from the Semi-Structured Interview Form applied to English language prospective teachers.

Table 5. Findings consisting examples given with proverbs and aphorisms.

Target topic	Counter example
Essentialism	*Esasında eşeğin yavrusu sığa terbiyesi sopa ('esasında' sounds like 'essentialism and its meaning is similar to this term in Turkish) (Actually, foal is the baby of donkey, and ferule is the discipline for donkey)
Behaviourism	Action speaks louder than the words
Humanism	I'm not humanist! Don't come again whoever you are; Don't tense me I'm not Mevlana!
Spread of effect	The ends justify the means
Negative identity	Sometimes a wise man can have a tyrant son
Avoidance conditioning	Go around the bush rather than fighting with the dog
Metacognitive	Knowledge should mean a full grasp of knowledge, Knowledge means to know yourself, heart and soul. (famous verses of a Turkish sufi poet Yunus Emre)
Socratic method	God first deprives the wretch of his donkey then permits him find it again
Law order period	The sword of justice has no scabbard
Species-specific readiness	*Goose flies but 'Laz' does not ('Laz' is a South-Caucasian origin person living in the Black Sea region of Turkey)
Reflective thinking	A Muslim can not be washed twice in the same river
Learning through experience	Example is better than precept
Learned helplessness	Too much coyness bores the lover
Self-fulfilling prophecy	My worst fears came true
Trial-and-error learning	Baghdad can be found by wandering
Absolute evaluation	Every tub must stand on its own bottom
Relative evaluation	Throw the baby out with the bathwater
Cognitive, affective and psychomotor behaviours	Atatürk says 'I like the sportsman who is intelligent, agile and moral'
Generalization	Once burnt twice shy
Differentiation	They call the best horse as 'bay horse' and the valiant as 'crazy'
There are individual differences in education	Five fingers are not similar to each other
As the experiences increase, the number of the sense increase as well	The one who travels a lot knows more than the one who reads a lot
Primary needs, motivation and reinforcement	Hungry bear doesn't dance
Transparency	Either seem as you are or be as you seem (a famous saying by sufi mystic Islamic scholar Mevlana known world-wide)
Clean acceptance	Come again whoever you are (a famous saying by sufi mystic Islamic scholar Mevlana known world-wide)
Multiple intelligence theory	Everybody cherishes his/her own way of doing things
Readiness	Wait to see which way the cat will jump
Development forms wholeness	Blood is thicker than water
Construct Validity	*Bu ne perhiz, bu ne lahana turşusu (You said you are on diet but you eat pickled cabbage! What a contrast! –a famous Turkish aphorism)
Critical period	As the twig is bent, so grows the tree
Avoidance-avoidance conflict	I'm on the horns of dilemma
Reporting	Coming events cast their shadows before
Phenomenological approach	What I say is as much as what you understand
Sense of humour is inherited	Once a priest, always a priest
Tendency to be good child	*Dostlar alışverişte görsün (My friends should see me while shopping (an aphorism in Turkish to show one's generosity to his/her friends)
Counter conditioning	One who loves roses should endure the thorns
Working memory	A rolling stone gathers no mosses

Table 5. Contd.

Vitality Principle	*Göğe direk, denize kapak olmaz (No post to sky, no cover to sea) (a proverb in Turkish to explain impossibility)
Intrapersonal intelligence	Stand on one's own (two) feet
Maturation	No pain no gain
Self-interested tendency	Throw out a sprat to catch a mackerel
Bear technique	Raw chicken can be eaten for a person's sake
Fox technique	Running with the hare and hunting with the hounds

Mnemonic devices (loci, peg-word system, relationship, acronym, key words, rhythm, analogy, proverbs and aphorisms, using interesting and unnatural examples etc.) is a good way to provide meaningful learning (Ulusoy *et al.*, 2006) and to establish a call for recalling the knowledge imprinted in the long-term memory (Arı, 2005; Kleinheksel and Summy, 2003 ; Karadüz, 2003). Learners utilize from different methods when imprinting knowledge from short-term memory to long-term memory. In this study, the findings gathered from the English teachers indicate that examples retained to their memory most are the ones associated to irrelevant cases. Besides, examples close to their real meanings and given with proverbs and aphorisms have been found to be effective on retention. Even considering that techniques used for retention have been applied by establishing natural and unnatural connotations, (Siriganjanavong, 2012; Senemoğlu, 2011, Mastropieri and Scruggs, 1998; Kristina, 2010; Baleghizadeh and Ashoori, 2010) those kinds of examples including proverbs and aphorisms are said to be effective.

Many studies have been conducted concerning the fact that mnemonic devices given with unnatural connotations make learning meaningful and permanent (Belfior and Şener, 2000; Carney and Levin, 2000; Mastropieri, Sweda and Scruggs, 2000; Olçum, 2000; Carlson, Buskist and Martin, 2000; Jitendra, Edwards and Jacobson, 2004; Keskinılıç, 2005; Kütük, 2007; Çalık, Ayas and Coll, 2009; Harris, Schumaker and Deshler, 2011). This study reveals that learning becomes more enjoyable and permanent when the learners combine the authentic elements containing sense of humour, (Yetkin, 2006; Saygın *et al.*, 2004) entertainment, interesting sayings and feelings that they may encounter in their daily lives. Yet, the more knowledge is related to real life, the easier it will become to recall (Mastropieri and Scruggs, 1998; Demirel, 2008). In this way, knowledge, so called-memorization will disappear (Mcduffie, 2007; Brazley, 2008; Göl, 2009; Kiroğlu, 2010).

In conclusion, this study indicates that thanks to the skills that teachers have in teaching learning has become meaningful and permanent through the examples (associated to irrelevant cases) they have given with unnatural connotations. It can be said to create a perception of faith that what we can do more to ensure

the retention on the contrary to the cases so called-forgetting.

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