1. Introduction

One of the agreements in our field is that students need practice, practice and practice again before they can become proficient in the Chinese language. The most convincing theory for increased practice in language teaching and learning is the information processing theory in cognitive psychology, which provides us with a developmental view of the acquisition of language skills (Schneider and Shiffrin, 1977; Anderson, 1982, 1985; MacLaughlin, 1990). According to this theory, two stages are involved in the process of acquiring language skills: controlled and automatic processing. Controlled processing is a temporary activation under attention control and it is capacity-limited and requires more time for the activation. At this stage the learners have to spend much of their attention to integrate the pieces of information. Controlled processing necessarily intrudes on the ability to perform simultaneously any other task that also requires a capacity investment. Automatic processing involves the activation of certain nodes in memory every time the appropriate inputs are present. This activation is a learned response that has been built up through the consistent mapping of the same input to the same pattern of activation over many trials. Controlled processing requires attention and takes time, but through practice, subskills become automatic and controlled processes are free to be allocated to higher level of processing. It is controlled processes that regulate the flow of information from working memory to long-term memory. Learning involves time, but once automatic processes are set up at one stage in the development of a complex information-processing skill, controlled processes are free to be allocated to higher levels of processing. This suggests that repeated practice is essential for our students to develop their language proficiency.

McLaughlin (1990) argues that practice can lead to improvement in performance as sub-skills become automated and it is also possible for increased practice to create conditions for restructuring i.e. the qualitative change from stage to stage with each stage constitutes a new internal organization and not merely the addition of new structural elements. The implication for language learning is that increased practice not only leads to quantitative change but also results in qualitative change, i.e. practice can assist students in developing both their fluency and precision of their foreign language skills. This has been approved by many scholars in foreign language pedagogy research such as Ellis (1985, 1988) and Rivers (1990). Ellis (1985) concludes that language learning involves consolidating hypotheses about the language by accumulating confirmatory evidence. Rivers (1990) believes that, through increased practice, foreign language learners will modify and improve their mental representation of the language rules.
Ke’s (1999) recent exploratory study of acquisition patterns of Chinese sentence patterns indicates that Chinese-as-a-foreign-language learners experience a U-shaped trend in their learning of certain grammatical patterns. It suggests that acquisition of grammar requires sufficient practice and students’ performance on certain grammatical patterns may deteriorate without sufficient use of the patterns over time.

It is obvious from the above discussion that sufficient practice is absolutely essential for our students to develop their Chinese competency. However, frequent repetition of the same activity is often difficult for many of our adult learners because overlearning through repetitious activities often causes fatigue and distaste on the part of the learner. Moreover, mere repetition of an item is not as effective as encountering the same item in different contexts. Consequently, it is essential for teachers to design various learning activities that encourage repeated active and meaningful practice. In order to ensure sufficient practice, the principle of spiraling, or recycling, is fundamental in instruction and materials development. By spiraling or recycling we mean that, after introducing and practicing a 语言点, we systematically and repeatedly recycle them at a higher level throughout the course before our students can use it independently and freely in meaningful communication. The term 语言点 is used here to refer to any instructional item such as a word, a grammatical pattern, a discourse structure, or a learning strategy or metacognitive skill or any other aspect of instruction that we deem necessary for successful learning of Chinese as a foreign language.

When we examine our current practice by investigating the materials and classroom practices, we find we mostly adopt a linear rather than a spiraling approach, i.e. dealing with a new item within the lesson intensively and than moving one to the next new item without systematic spiraling across lessons. This is especially true with regards to the spiraling of discourse structures, functional tasks and metacognitive skills. There seems to be a need of applying the spiraling/recycling principle in our current curriculum design.

2. What should be Spiraled?

Having established our position that repeated practice is essential and that spiraling is an effective approach for achieving the necessary repeated practice, our next question is how to integrate the spiraling concept into our curriculum design. The two specific questions we need to ask are 1) what should be spiraled systematically and 2) how we can plan our instruction to help our students spiral what should be spiraled. When we look at our current classroom instruction and materials development we can find that we recycle words and sentence patterns better, but not as well in terms of systematic spiraling in the areas of discourse structures, rhetoric devices, social cultural and pragmatic competence, functional tasks and metacognitive strategies. But the latter has been found absolutely essential for successful language learning. For instance, Bai (1997) shows that it is absolutely essential to take text structure into consideration in our curriculum. He also points out that, like any skill, the ability of text structures has to be taught and practiced repeatedly in meaningful communicative contexts in order to be learned.
effectively. Baker and Brown's (1984) review of research indicates that students who receive only instruction in the skills without sufficient practice often fail to use them intelligently and on their own volition, nor do they grasp where and when to use them. If we want our students to use any text structure independently, we have to ensure sufficient practice of the text structure. As mentioned above in this paper, our current practice of materials development and teaching does not spiral text structures and the discourse functions of the grammar systematically. We need to design learning activities for our students to practice using text structures repeatedly in different meaningful contexts. Chu’s (1998) Discourse Grammar of Mandarin Chinese is a very informative and valuable book for us to consult when we design learning materials and activities to help our students spiral and develop beyond-sentence-level Chinese competencies.

Another area that needs attention when we think of the spiraling principle is the development of sociocultural and pragmatic competence, which requires an understanding of the sociocultural and contextual forces upon the choice of linguistic forms. Research studies in cultural psychology (Cole 1994) shows that cultural competence is a cognitive process. Our students need sufficient practice in order to obtain the necessary sociocultural competence for successful and effective communication. Although we have gradually realized the importance of developing social cultural and pragmatic competencies our teaching materials and practice do not reflect that systematically. We need to take social cultural competence into account in our spiraling process of instructional design. In the recent years some informative books and articles have been published on the sociocultural and pragmatic issues of the Chinese language (Liao, 1994; Chang 1995; Qian 1997; Hong 1998 to name a few). For instance, Liao’s research findings on Chinese refusal strategies and Chang’s (1995) studies on the cultural forces underlying Chinese vocabulary are both valuable sources for us to make informed pedagogical decisions. Other valuable resources include Canale and Swain (1980) and McKay and Hornberger (1996).

Strategic competence and metacognitive skills should also be considered in the process of spiraling. Research has shown that strategic competence and metacognitive skills are desired outcomes of successful language learning. For instance, in the area of reading research, Pearson et al (1992) find that good readers: 1) Search for connections between what they know and the new information they encounter in the text they read. 2) Monitor the adequacy of their reading comprehension. 3) Take steps to repair faulty comprehension once they realize they have failed to understand something. 4) Learn early on to distinguish important from less important ideas in texts that they read. 5) Are adept at synthesizing information within and across texts and reading experience. 6) Draw inferences during and after reading to achieve a full and integrated understanding of what they read. The recent lively discussion on the discussion list of Chinese deals with the learning and teaching strategies for memorizing Chinese characters and many colleagues shared what they believe to be the successful strategies for learning Chinese characters. For instance, instead of rote memorization of all the strokes, it may be more effective to memorize the characters by taking them apart into meaningful parts and relate some of the parts to characters that they had learned before. When we take a look at our current teaching
materials we seem to find a lack of treatment in terms of the development of strategic competence and metacognitive skills, which should receive more attention when we think of spiraling in our curriculum design. Oxford (1996) is a very informative resource with regard to the development of strategic competence and metacognitive skills.

It is obvious from the above discussion that, in addition to words and sentence patterns, there are other areas that should be taken into consideration in the process of spiraling of instructional design. We need to further explore and identify the specific instructional units or items of those areas, such as sociocultural competence and strategic competence, which should be systematically spiraled during the course of study. After we have a more clear understanding of what should be spiraled systematically, we need to explore how we can design our curriculum that successfully integrate the concept of recycling/spiraling. The remaining part of the paper will deal with some of the possible instructional innovations that help integrate the spiraling principle into our curriculum design.

3. Some Guiding Principles for Successful Spiraling

3.1. Use Multiple Contexts to Practice

We should continue to do what we have been doing well with the fast-paced rapid fire drill of vocabulary and sentence patterns in multiple contexts. Multiple contexts refer to the use of the language point in different meaningful contents and by different practice formats. The following are some examples to illustrate how vocabulary and sentence patterns are recycled/spiraled in multiple meaningful contexts. The first example is for the practice of “A 嫌 B...”. After the teacher explained the meaning and the structural features the teacher used the simple technique of question and answer to help students practice: the teacher asked a question (see below for four examples) ➔ made a short pause ➔ and pointed at a student for response. If a student forgot to use the word 嫌, the teacher pointed at the word on the board and the student would respond again using 嫌. Error correction was done whenever errors occurred. The practice was focused and well paced.

1) 在中国，你每天早上为什么不去跑步？
2) 为什么有的美国人不喜欢住在纽约那样的大城市？
3) 为什么很多年轻人不喜欢肯尼基的音乐？
4) 北京和上海你更喜欢哪个地方？为什么？

Another example is the practice of “宁可...也要(也不) ...”
Having explained the meaning and the word order of the sentence pattern, the teacher used the format of sentence completion to lead students to practice in various meaningful contexts as follows.

1) 我特别不喜欢吃方便面，所以____
2) 他越来越恨他的同屋，所以明年他 ______
3) 他染上了毒瘾，所以他___

After the sentence completion task, the teacher used the question-and-answer activity as illustrated below, which lead students to less-controlled learning activity that required more thinking and more participation on the part of students.

1) 自由恋爱会惹父母生气，你会不会赞成包办婚姻？
2) 如果经济困难，你打工也要念完研究院吗？

In designing the multiple contexts for successful spiraling teachers should attempt to create information gaps, i.e. to make the content and learning activities engaging and intellectually stimulating so that students are eager to participate in the designed practice activities. The following are some examples in this regard. For each pair of the following question-and-answer practice exercises, Question A is what I observed in actual classroom teaching. Question B is what I suggested as an alternative that may make the practice more engaging and more stimulating.

练习“词汇”

1A Q&A：英语中的词汇有多少？
1B Q&A：用...这样的词汇来形容我父亲(母亲/男朋友/某老师)最合适。

美国的经济现状
中美关系

练习“引起...关注”

1A 两个部长的会面有没有引起舆论界的关注？
1B 什么样的问题常常引起舆论界的关注？
中国哪些问题常常引起国际舆论界的关注？

练习“冲突，处理”

1A 发生冲突的时候应该怎么处理？
1B 跟父母(教授/警察)发生冲突，你会怎么处理？

练习“鼓励”

1A 你比赛的时候你的朋友都鼓励你吗？
1B 要想让孩子有出息，父母应该鼓励孩子_____？

练习“在…看来”

1A 在你看来，今天会下雪吗？
    某某同学今天会来吗？
    某某老师去过美国吗？

1B 在你看来，堕胎跟杀人一样吗？
    父母该不该打孩子？
    吸毒该不该合法化？为什么？

In order to create successful information gaps in lesson planning the key words are相关性，交际性，知识性，争议性，挑战性。We should make the content provocative and communicative, provide multiple contexts that are interesting and meaningful and make sure that the content intellectually stimulating. In addition to doing them intensively within the lesson the language point should be revisited across lessons throughout the course, i.e. spiraling across lessons.

3.2. Use Multiple Learning Activities/Tasks to Practice 语言点with a Focus

In addition to creating various illustrative examples of multiple meaningful contexts as discussed above we should also design multiple learning tasks that help our students spiral with a focus. When we encounter a new phrase or structure one of the common practice is to explain many of the uses of the phrase or structure without providing students with sufficient practice that focuses on the use of the phrase or structure. The following is an example that I observed in actual classroom teaching: when the connective 而 occurred in the lesson the teacher discussed the various uses and meanings of the connective instead of creating various learning tasks for students to use 而 meaningfully and repeatedly. The teacher lectured on the usage of the word and gave one or two examples for each usage while the students were busy taking notes:

1) 表示转折
    这种苹果大而不甜。
2）表示互补
    他写的文章简练而生动。

3）表示目的
    他为了学中文而来中国。

4）表示状态
    不战而胜

In my opinion the above approach doesn’t seem to be appropriate or effective. It would have been much better if he had made clear one of the uses of 而, which is relevant to the current lesson, and made clear its limitations both in terms its grammatical and semantic features and then created many motivating and interesting activities and contexts for students to practice. It is not advisable to spend much of the class time explaining many uses of that phrase/structure and spend very little time providing non-contextualised isolated examples for each of the uses. If students spend most of their time taking notes without actually using the language, they are less likely to develop their communicative competence even though the notes may help them become better informed about the structure of the Chinese language. As the supervisor of the teacher I would recommend that 而 is practiced as follows, focusing on one of the uses and create various meaningful contexts for the students to practice using the word repeatedly. As illustrated below the practice moves from well-controlled class activities to open-ended questions.

词语替换：
有的人认为爱情重要，可是有的人认为面包重要。
我喜欢古典音乐，可是我的母亲却喜欢摇滚乐。
人们看电视都讨厌广告，可是我觉得广告很好看。

完成句子：
父母都喜欢孩子----而孩子们都----
我毕业后想 ----而我的父母希望我 ----

Q&A：
在堕胎问题上，美国人有哪些看法？
你跟你的朋友们(父母)在什么问题上有不同的看法？

句段描述：
谈谈职业A和B的苦与乐。

The most difficult reality is that, when a teacher only focuses on one usage, some students might complain that the teacher is not teaching enough or is not as knowledgeable as those who do spend lots of time explaining about all the possible uses of a particular structure. This is
especially problematic in a Chinese program where different teachers rotate to teach the same
group of students. We need to convince our students that repeated practice is absolutely
necessary, and on the other hand, make our learning activities motivating, meaningful and
engaging. Ellis (1988) studied the effects of practice on language proficiency and warned that
controlled practice facilitates acquisition only when it is communicative, i.e. meaning-focused in
nature.

3.3 Use a Functional Approach to Spiral Several Semantically Related 语言点

This design principle is based on the notion of function-based instruction. When similar
语言点 are integrated into one functional task, it not only helps students improve their
memorization, but also enhance their understanding of the 语言点 with regard to their stylistic
differences and sociocultural connotations. For instance, for any functional task such as
expressing one’s disagreement or comparing things or people, there are always opportunities for
the learners to spiral semantically related words and structures. For example, when we introduce
与其, 不如 to our students and help them acquire the competency of comparing, we have the
good opportunity of recycling other comparison structures such as 比, 与...相比 等. By
comparing and recycling/integrating the new with the learned, students can reinforce their
relevant knowledge and skill. They can also understand the new content better since they are
dealing with structures that are used for achieving similar functional/communicative tasks. A
good example can be drawn from Zhang’s (1993) textbook of Advanced Spoken Chinese.
Students were given the following groups of expressions and asked to express their opinion or
viewpoint on whether or not parents should physically punish their children when the children do
something wrong.

表 示 同 意 , 赞 成 :  
1. 我同意这个意见。（赞成这种观点。支持这种做法）
2. 我完全（十分，绝对）同意......
3. 这种做法很有道理。（这种说法是正确的。这个观点无可非议。）
4. 对......我表示同意（理解，支持）。
5. 我对 ......持肯定态度（赞成意见）。

表 示 反对，否定：
1 我反对（不同意，不赞成）......
2 我不完全（不太，不大，有点儿不）同意 ......
3 ......毫无道理（完全不对，是对的，应该受到责备）
4 我对 ......（持有异议，表示反对）
5 ......定，不见得）有道理。

The above example is a very effective way of spiraling related words and structures in a
functional task that helps students to practice expressing agreement and disagreement. There
could be other ways of organizing when we design function-based spiraling tasks such as
explaining, suggesting, demanding, praising and etc. For example, Liao’s (1994: 63) studies

3.4. Use a Holistic Approach to Spiral thematically related language points

Unit reviews of our current textbooks often include many discrete-point exercises such as multiple choice, fill-in-the-blanks, sentence completion and etc. These exercises help students practice their language points at sentence level and in isolated contexts and therefore may not be as effective as holistic tasks which integrate the language points around a meaningful theme. One of the distinguished features of the textbook, Beyond the Basics (Bai, Sung and Xing, 1996), is its holistic tasks as unit reviews at the end of each chapter that help students spiral the language points in a meaningful thematic context. The following is an example. In order to complete the task students need to use the language points that they have learned in the meaningful discussion of their families.

请写完“我家的故事”，并在课堂上读给同学听。

1. 我家有________。
2. 爸爸教育我们要________，而且________。
3. 我小的时候喜欢和弟弟吵架，我们之间的问题常常是由________引起的。
4. 妈妈年轻的时候念了大学，但是________。
5. 姐姐不但喜欢________也喜欢________，并且________。
6. 哥哥是我的好朋友，他的________对我有很大的影响，可是________。
7. 假如我的家________，我们的情况会比现在好得多。
8. 虽然________但是________。

After a learning unit on the topic of love and romance we developed several meaningful holistic tasks that help students spiral the language points of the unit. Following is one example that helps students to spiral language points in a meaningful theme of情书大赛. The incomplete sentences were designed by the teachers and contained language points that have been taught. Students need to complete the sentences with more of the language points that they have learned and then to write a short
“love letter” to share among themselves. Students are free to read their letters in teacher-lead small group activities. The readings lead to more class activities such as question-and-answer or discussion and debate on issues raised in the letter reading.

一九九五年明德暑校三年级课堂活动之八：情书大赛

1. 我之所以爱你是因为...难道...
2. 在成千上万的人之中，我竟迷上了你。
3. 对我来说，只有...能代表我的心。
4. 是你的...吸引了我。
5. 我就是一辈子不...也...
6. 自从我认识了你...
7. 我每次接到你的电话，就不禁...
8. 我想我们应该趁...,省得...
9. 我被你的...感动了。
10. 我们不应该为了...伤和气。
11. 既然我们相爱，就...
12. 虽然我不完美，不过，整体看来...
13. 在我看来，我们早晚...
14. 我不敢说我是...我只能说...
15. 我们结婚以后，无论...都...

When we teach the chapter of the night market of Taiwan Today (Teng and Perry 1996) students are introduced to such words and phrases as

五花八门 常见的 还有 另外 对来说 不只是 而且是

To help students spiral these words we first ask students to retell what they have learned from the chapter of 夜市；they need to plug all those words into their short summary of what they have learned about the night market in Taipei. Having done that we move to the discussion of other themes such as food, sports or entertainment activities of American or another country they know well. In the process of their discussion the above 语言点 can be spiraled cohesively and coherently in different meaningful themes.

As can be seen from the above examples, holistic tasks provide a richer and more meaning-focused learning context for students to spiral their 语言点. Holistic tasks such as role-play, group discussion or essay writing are potential tasks for successfully spiraling thematically related 语言点. Role-play activities are especially useful when the class size is too large and for out of class activities. However, when we use role-play as a learning activity, we may encounter the problems of slow pace and circumlocution and new content cannot be appropriately practiced. It takes special and careful planning in order for role-play to be useful and effective. The use of role-play is not as simple as giving the students a role and a topic and then for the teacher to sit there and listen. The teacher should prepare a list of conversation topic and break each of the topics into subtopics and then lead students from one subtopic to the next subtopic
smoothly and meaningfully. The teachers should have a clear objective of what 语言点 are to be used for each of the subtopics when they prepare their lesson plans that aim to spiral thematically related 语言点 in holistic tasks.

4. Conclusion

We have argued for the adoption of the spiraling principle in our curriculum design instead of the current liner one. The spiraling will improve our effectiveness of teaching and learning of Chinese as a foreign language. In addition to words and sentences patterns other areas that need more spiraling include discourse structures, rhetoric devices, functional tasks and metacognitive strategies. Some possible instructional innovations were suggested for more effective spiraling in our curriculum. Before textbooks with the systematic spiraling approach become available, the role of the teacher is to make the learning activities of our current curriculum more spiraling. We should create abundant, well-planned and engaging opportunities for our students to obtain sufficient practice over time and maximize learning. Whenever we make a lesson plan, we should always think of the previously taught 语言点 and see how they can be revisited and integrated into the current lesson plan. We should always try and be creative in experimenting new teaching and learning techniques that encourage active and effective recycling and spiraling.

Notes:
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References:
   *International Conference on Chinese Language Teaching and Learning at Columbia University.*