

Literature Review on Differentiated Instruction among College Students

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Abstract. Krashen's hypothesis states that input should be challenging but not overly difficult, which makes the design of college English education critical. This article focuses on the application of Graded Teaching under the guidance of differentiated instruction and three of its influencing factors. Schools should provide appropriate policies for Graded Teaching mode. Teachers and course designers also need to select materials of appropriate difficulty to facilitate students' language acquisition. Learners themselves are not only the receivers, but the dominant power of Graded Teaching as well. Thus, in university English education, Krashen's input hypothesis provides a theoretical basis that emphasizes the importance of the quality of input and moderate difficulty. This is instructive in helping students to better acquire English language skills and application at the university level. Therefore, researchers can focus on how to effectively utilize Krashen's theory of input hypothesis to improve the teaching methods and material design of university English education to better meet students' learning needs.

Keywords: Differentiated Instruction, Input Hypothesis, Second Language Acquisition.

1. Introduction

Graded teaching, which means to separate different classes or groups to manage according to students' ability or study scores, is a common method used in the field of education. The research of the application of this method have experienced a long period both domestically and abroad. American scholar Robert Slaven recommended that every way of Graded Teaching has its limits, which can turn to serious situations where the advantages can be ignored. However, it is not a solid mode. Instead, it has many different forms, and each of them will create different effects on education and mental health [1]. At present, the trend of internationalization of higher education is becoming more and more obvious. Academic research and international integration have become an indispensable part of the key, so the requirements for language teaching have also increased. Personalized teaching needs to meet higher conditions. For example, higher education involves a wide range of groups, and different people have different characteristics, which means that the teaching mode has to be "one-to-one" to achieve "differentiated instruction". It is an ideal situation, but too hard to actualize. Dividing students into different classes of the grading according to their performances is the most common application of the mode in China's colleges and universities. The present paper will take this as an opportunity to explore China's current status of the application of Graded Teaching and its response to the problem.

World famous linguist Krashen came up with the Monitor Theory of Second Language Acquisition in the 1980s. One part named Input Hypothesis provides important theory support and leading method to how learners find the correct way and how teachers achieve higher classroom efficiency [2]. Input Hypothesis, cored by "i+1" mode, describes the process of how learners acquire languages in a specific way. "i" means the present language level of the learner, and "1" means the materials which are a little difficult for the learner to understand. During the acquisition process, learners obtain a lot of understandable materials so that they can turn the input into digestion. The necessary condition is that the current level of language ability is slightly lower than the materials and the understanding of

the meaning or information of the input, that is, the comprehensibility of the learning material rather than the form is emphasized [3]. People's understanding of the effects of Graded Teaching in higher education remains poor. Few studies on the positive impacts of Graded Teaching on college students' acquisition thus far. This paper compared the effects that Graded Teaching will help improve the design of teaching content in a balanced way, with understandable materials for students and a suitable teaching mode for teachers, and maximize the result of Graded Teaching.

2. The Development of Graded Teaching

Differentiated instruction seeks to offer learning opportunities that take into account each student's unique learning style while ensuring that major students are equally accessible to important academic material. For students who require more practice with fundamental concepts before proceeding, the content may be altered; however, it is anticipated that changes made elsewhere will eventually encourage all students to master core concepts. As a result, individualized instruction and differentiated instruction are not the same. Each student is learning the same material differently, but they are not each learning something unique. Additionally, it is not necessary to teach each student individually. To enable each student to approach a task uniquely, differentiated instruction entails presenting the same task at different levels and in different ways. Differentiated instruction is an approach to teaching, not just a set of techniques or exercises, and this must be understood. For differentiation to be effective, students' needs must be continuously assessed, and instructional activities and assessments must be thoughtfully created to address those needs. Educators indeed need to be well-versed in a wide range of research-based teaching techniques, but they also need to be able to "think outside the box" to fulfill the needs of all students.

A teacher's ability to effectively differentiate instruction is essential to meeting the needs of individual and diverse students. This is because the goal of differentiated instruction is to maximize educational outcomes for every student [4]. Differentiated instruction, according to Tomlinson, is an instructional strategy in which educators alter course material, proactively create a range of instructional techniques, and consistently review the intended learning outcome. Based on this, the teacher's objective in a differentiated classroom is to enable students to swiftly and effectively build upon their knowledge by making connections with their prior learning. Placing students in homogeneous ability groups through a selection process, known as 'streaming', 'setting' or 'tracking' based on attainment grouping is the most renowned method to classify diverse learning needs [5]. Yet, more researchers have questioned the value of attainment grouping [6]. An Australian context has noted that while research is contentious and often contested, the literature generally shows that streaming impacts negatively on student learning outcomes [7].

In the 1970s and 1980s, constructivist luminaries like Piaget and Vygotsky proposed theoretical changes in education and pedagogy that contributed significantly to the development of differentiated instruction, especially when it comes to heterogeneous groups [8, 9]. As a result, the ideology that opportunities for meaningful learning can be implemented by establishing students' absorbed knowledge and then proposing new knowledge in a way that allows students to create their thoughts became the center of classroom instruction [10]. In the context of contemporary secondary mathematics education, differentiated instruction is understood to be proactive in adjusting lessons to students' mathematical thinking styles while also creating a supportive learning environment [11].

To give all students the finest learning opportunities, teachers are arranged to implement differentiated instruction, which is the intentional modification of the content, learning process, assessment product, learning environment, and learning time to each student's unique learning needs. High-quality differentiated instruction has been demonstrated to positively impact student achievement. Additionally, some signs differentiated instruction can have a positive impact on nonacademic outcomes like students' social and emotional growth (i.e., academic self-concept, school wellbeing, and social inclusion). Differentiated instruction can benefit teachers' job satisfaction in addition to having a positive impact on students such that they feel accomplished and

well-pleasing in their teaching process. Moreover, a new study examining differentiated instruction across multiple countries discovered a low observed differentiated instruction quality, and that it is found less frequently in classrooms than other teaching strategies, like classroom management or creating a positive learning environment. Even for seasoned teachers worldwide, differentiated instruction seems to be one of the comes to apply learned differentiated instruction theory to their unique teaching practices.

3. Synthesis of Research on Graded Teaching in Domestic Universities

3.1. Research Objects

Based on the pre-research, the main group of questionnaires and interviews are students and teachers. From the perspective of the theory of Graded Teaching, the traditional form with the core of teachers is no longer suitable for today's education. Instead, a student-centered model of education, where groups of students are graded according to ability or achievement are more similar in characteristics, allows teachers to use content and methods of teaching that are adapted to the individuality of the group in the course of the lesson.

3.1.1 A Review of Research on the Effectiveness of Student-Graded Instruction

According to Tomlison's concept of Differentiated Instruction (excluding environmental modifications) (Hereinafter referred to as DI), content involves materials that support teaching themes, methods that outline tasks and objectives as goals, and the belief that instruction is concept-centered and principle-driven. Access content is a central goal, as is integration with national standards and high-stakes standardized testing. The content instructs students to learn the same concepts but adjusts the level of complexity to accommodate academic diversity among learners. For example, more capable students may work on synthesizing or implementing a concept, while students who find the course material challenging may work on the definition, comparison/contrast, or summary of the same concept. The definition of DI by Heacox is teaching that meets students' levels, needs, learning styles and interests, while Willis considered DI as a teaching method in which teachers adapt to students according to their differences [12].

There is a grade difference between schools in the implementation of graded teaching: that is, the situation of ordinary private or independent colleges implementing graded teaching is less, and the prevalence of graded teaching in 985 and 211 colleges is higher. There is a positive correlation between students' acceptance of dynamic management applications and university grade classification. Moreover, students' acceptance of graded teaching is more influenced by psychological factors than the rationality of graded teaching results [13]. Wang Xiaolu also conducted a survey on Graded Teaching at S University in his article Construction of Graded Teaching Management Model of College English Based on Personalized Teaching published in 2022. The grading principle of the school is divided according to the combination of the English scores of the college entrance examination and the entrance examination in a certain proportion. However, in the later teaching process, problems such as low curriculum flexibility and weak implementation of attendance management and flow management modes are still exposed [14]. Some schools even have the situation of grading according to entrance exam results. It is obvious from SWOT analysis that this measure only sees temporary output, and does not comprehensively consider ability and phased learning results, which has a negative impact on students' psychology. Still using the same teaching materials violates the principle of graded teaching and is not conducive to achieving the teaching objectives of different levels [15].

3.1.2 A Review of Research on Teachers' Evaluation of the Effectiveness of Graded Instructional Applications

Today's higher education system is facing the problems of unbalanced and unreasonable teaching resources, such as unbalanced gender and educational background. Teachers also have higher

pressure on daily teaching missions, which means that it is hard for teachers to devote themselves to scientific research projects. This has led to a gradual weakening of research capacity, which is not conducive to the personal career development of teachers, nor is it facilitate the stabilization and improvement of teaching quality in the long run [16]. In contrast to the conventional teaching method, graded teaching is more demanding for teachers, and under the requirement of being results-oriented. To achieve superior teaching outcomes, teachers should focus on the characteristics of students, and then choose the most suitable way at the level of the design of the teaching content and the implementation of teaching methods, so that they can promote the knowledge acquisition of students [17]. A good implementation of the principle of graded teaching should put students at the center of language learning, with the learner as the primary focus and the teacher as the helper. Therefore, schools should allocate teachers' resources in a way that is fair and fully utilize their individual strength. Mobile teaching should also be adopted so that teachers can have more contact with students with different characteristics. Both sides can benefit from each other, and help teachers to improve their teaching level while ensuring the effect of students' acquisition [16]. In order to form a good teacher-student relationship, teachers should have more communication with students in daily teaching, and reduce coercive behaviors, such as orders, try to understand more about students' learning needs, and respect students' choices in acquisition methods [17].

3.2. Factors Influencing the Effectiveness of Graded Instruction

By summarizing the results of the above study, the reasons can be analyzed from three levels: schools, teachers and individuals. On the school side, firstly, the credit system for graded teaching and the arrangement of teaching content and progress have certain shortcomings in implementation. For more demanding students, the credit system is more stringent, and the autonomy of elective courses is less selective, which is not capable of meeting the requirements of students in arranging credits according to their own situation, thus affecting the effect of students' acquisitions. Secondly, regarding the teaching settings, because of the higher goals and positioning of the students for higher requirements, the arrangement of teaching content is also relatively numerous and fast-paced, which does not fully satisfy the adaptability of students [18]. On the teachers' side, affected by objective factors (i.e., the fear of affecting the cohesion of the class and the degree of cooperation of the group, as well as out of the workload of the teachers themselves and the work pressure of the teachers' own), it is necessary to consider the existence of lowering the implementation of graded teaching, if so, teachers will not be able to meet the different level's requirements of the students. Regarding teaching ability and attitude: the data show that students are less satisfied with teachers' feedback on after-class Q&A and coursework assessment, i.e., they hope that teachers can provide targeted feedback and guidance on students' learning performance. To play the main role of students in personalized teaching, teachers seriously perform the functions of organizer, manager, helper [15, 18]; Third, personal reasons: independent learning ability, personality phenomenon and so on. The phenomenon of personality has many different opinions, this essay focuses on the "orientation theory" put forward by the Swiss psychologist Jung, i.e., according to the individual's psychological activity tends to the outside or the inside, the human personality is divided into extroverted and introverted types. The personalized teaching of college English should fully respect the different personalities of students, and set up a teaching mode that conforms to the characteristics of the groups of students with different personalities. Maximize the acquisition of content [14].

3.3. The Effect of Graded Teaching Method

The research is carried out in the form of a questionnaire. The questionnaire aims to find the most effective way for students to take in knowledge. Students were categorized into 5 groups: non-public school, public school, mean, median and standard deviation. Table 1 shows 5 teaching methods: group work, written test, in-class performance, discussion, and essay. From the table, readers can see that most of the students prefer discussion, accounting for around 53 per cent [19].

Table 1. The forms of expression amongst learners-nonpublic and public schools

	Group work	Written test	Through in-class performance	Discussion	Essay	Not responded
Nonpublic school	5% 0%	5% 27.50%	12.50% 52%	55% 10.50%	12.50% 7.50%	10% 2.50%
Public school	6.66% 10%	10% 25%	18.34% 13.34%	55% 45%	10% 5%	0% 1.66%
Mean	5.42%	16.88%	24.05%	41.38%	8.75%	3.54%
Median	5.83%	17.50%	15.84%	50.00%	8.75%	2.08%
Standard Deviation	0.036	0.095	0.162	0.182	0.027	0.0383

The implementation of differentiated teaching can also be demonstrated by the DI model. DI model advocates for teachers to plan actively for different students. The model shows the impact of teachers' experience and teacher's qualifications on students. On top of that, the DI model stresses the importance of a teacher's experience and qualifications. Researchers of these studies think that a good teacher will link their teaching theory with practice. When facing challenges in the classroom, teachers without experience often struggle to apply the knowledge from their training to practice [20]. The same as teachers' experience, researchers' also recognize teachers' educational qualification as a contributing factor for DI implementation. Students' backgrounds are miscellaneous, therefore, it is essential to equip teachers with high credentials.

4. Conclusion

The application of the Graded Teaching Method in the college English teaching field is the product of implementing differentiated teaching strategies and meeting the need for differentiated instruction. However, it still has some problems under today's circumstances, which need for timely identification and guidance on corrections by the relevant authorities. For schools, a diversified assessment system needs to be used to achieve a comprehensive, scientific and fair assessment of each student. Teachers should encourage students to engage in cooperative, inquiry-based learning so that it contributes to students' ability to use language. Also, teachers should realize the different teacher-student identities under the Graded Teaching mode and be student-centered in their instructions. It is necessary to take into account the individual differences of students, and based on the principles of equality and respect to provide students with more rights to speak and to choose, and promote students' individualized construction of their own knowledge, abilities and character, so as to lay a solid foundation for the next step in the wide application of graded teaching. Although there are many researches based on Graded Teaching, the subjects of these researches tend to be young learners such as kindergarten and elementary schools, the research articles on Graded Teaching in higher education are still limited, so it is hoped that subsequent scholars can pay more attention to adult groups to enrich the field of language teaching among all ages.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

References

- [1] Xian Ding. Research in the United States on the effectiveness of classroom (group) teaching by ability. *Foreign Education Dynamics*, 1990, (02), 51-53.
- [2] Ying Jin. An Analysis of the Krashen Input Hypothesis and Cognitive Research on Second Language Acquisition. *Journal of Northeast Agricultural University (Social Science Edition)*, 2017, (02), 93-96.

- [3] Jiongying Li., & Xiuzhen Dai. Language Input in Graded College English Teaching from i+1 Theory. *Shandong Foreign Language Teaching*, 2001, (01), 54-58.
- [4] Tomlinson, C. A. Grading and differentiation: Paradox or good practice? *Theory Into Practice*, 2005, 44 (3), 262-269.
- [5] Jaremus, F., Gore, J., Fray, L., & Prieto-Rodriguez, E. Grouped out of STEM degrees: The overlooked mathematics 'glass ceiling' in NSW secondary schools. *International Journal of Inclusive Education*, 2020, 1-17.
- [6] Francis, B., Taylor, B., & Tereshchenko, A. Reassessing 'ability' grouping: Improving practice for equity and attainment. Routledge. 2019.
- [7] Johnston, O., & Wildy, H. The effects of streaming in the secondary school on learning outcomes for Australian students—A review of the international literature. *Australian Journal of Education*, 2016, 60 (1), 42-59.
- [8] Kalina, C., & Powell, K. Cognitive and social constructivism: Developing tools for an effective classroom. *Education*, 2009, 130 (2), 241-250.
- [9] Suprayogi, M. N., Valcke, M., & Godwin, R. Teachers and their implementation of differentiated instruction in the classroom. *Teaching and Teacher Education*, 2017, 67, 291-301.
- [10] Bada, S. O. Constructivism learning theory: A paradigm for teaching and learning. *Journal of Research & Method in Education*, 2015, 5 (6), 66-70.
- [11] Hackenberg, A. J., Creager, M., & Eker, A. Teaching practices for differentiating mathematics instruction for middle school students. *Mathematical Thinking and Learning*, 2020, 1-30.
- [12] Moya, N. P. G., & Tobar, M. C. S. Differentiated instruction: Productive skills development with high school and university students. *Investigación y Desarrollo*, 2016, 11 (1), 67-73.
- [13] Tingyun Wang; Miao Wang; Jiehua Wang; Li Sha. A Study on the Effectiveness of Graded Teaching of College English in Jiangsu Province. *Overseas English*, 2021, 000 (021), P.218-219, 231.
- [14] Xiaolu Wang. The Construction of English Graded Teaching Management Mode in Colleges and Universities Based on Personalized Learning. *Journal of Jiamusi University Social Sciences*, 2022, 40 (1), 213-217.
- [15] Wenjing, Li; Lun, Wang. *Annals of the Faculty of Engineering Hunedoara; Hunedoara*, 2014, Vol. 12, Iss. 2, 245-249.
- [16] Xiaoxian Guo. An Initial Study on Graded Teaching of College English. *Language and Culture Research*, 2012, 94-99.
- [17] Changjiang Liu. Educational Humanism and Differentiated Instruction of College English. *Education Review*, 2008, (4), 4.
- [18] Shouren Wang, & Haixiao Wang. Survey on the Status Quo of College English Teaching in China's Colleges and Universities and the Direction of College English Teaching Reform and Development. *Foreign Languages in China*, 2011, 8 (5), 9.
- [19] Ismajli, Hatixhe; Imami-Morina, Ilirjana. Differentiated Instruction: Understanding and Applying Interactive Strategies to Meet the Needs of All the Students. *International Journal of Instruction*, 2018, v11 n3 p207-218.
- [20] Shareefa, M. Demystifying the impact of teachers' qualification and experience on implementation of differentiated instruction. *International Journal of Instruction*, 2023, 16 (1), 393-416.