Nature and Thematic Review of PAL

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Abstract

The purpose of this article is to elucidate the misapprehension of peer–assisted learning (PAL), offer a thorough, integrated, and comprehensive review of literature, and propose viewpoints for educators and practitioners. Peer–assisted learning is one scheme which is growing in popularity in English as a foreign language (EFL) writing programs, and has already proved successful in a number of western countries. This article draws mainly on Falchikov's (2001)[1] peer tutoring and Fuchs' (1997)[2] cooperative learning theory illustrating group learning behavior in organizations and intends to vividly synthesize and analyze various research and provides a thorough review to the practice of PAL focusing upon the definition and approaches to set up schemes and how to cope with common problems confronted by the educators and consultants from grade schools to higher education. PAL strategies and models, such as same–level peer tutoring and cross–level peer tutoring, are discussed as an intervention of peer–mediated procedure for both classroom behavior management and direct instruction. Pertinent literature, advantages and disadvantages, alternative implementation procedures, and group composition are reviewed for educational practice and innovation. Furthermore, PAL in English as a Foreign Language writing program is discussed, and what remains unknown regarding peer–assisted learning is also presented.

Keywords: PAL, same–level peer tutoring, cross–level peer tutoring, English as a Foreign Language (EFL)

I. Introduction

There is a saying about learning: "we learn 10% of what we read; 20% of what we hear; 30% of what we see; 50% of what we both see and hear; 70% of what we discuss with others; 80% of what we experience personally; 90% of what we teach others" (Topping, 2000, p.4)[3] Truly, there are different effective approaches for diverse learners. There is not one single panacea for divergent learning situations. Peer–assisted learning (PAL) is one of the many approaches which have been shown by research to be the most effective ways of raising students achievements, if organized and implemented properly (King, Staffieri, & Adelgais, 1998[4]; Topping & Ehly, 1998).[5]

Peer–assisted learning (PAL) is one scheme which is growing in popularity in English as a foreign language writing program, and has already proved successful in a number of western countries. The purpose of this article is to elucidate the misapprehension of peer–assisted learning in Taiwan and offer a thorough, integrated, and comprehensive review of literature for educators and practitioners. The aspiration of this study is to contribute to the literature on PAL by focusing on approaches that are concerned with the cognitive processes underlying PAL. In this study, the researcher first defines the term PAL. Different types and models of peer–assisted learning are then reviewed. The researcher reviews the advantages, disadvantages, and group composition of peer–assisted learning for educational practice and innovation. Furthermore, PAL in English as a Foreign Language(EFL) writing program is discussed, and what remains unknown regarding peer–assisted learning is also presented.

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[3] Topping, K. J. "The effectiveness of peer tutoring in further and higher education: a typology and review of the literature", in S. Goodlad (ed.) *Mentoring and tutoring by students*, (London: Kogan Page, 2000).

[4] King, A., Staffieri, A., & Adelgais, A., "Mutual Peer Tutoring: Effects of Structuring Tutorial Interaction to Scaffold Peer Learning," *Journal of Educational Psychology*, Vol.90, No.1 (1998), pp.134-152.

[5] Topping, K. J., & Ehly, S. W. (Eds.), *Peer-assisted learning, Mahwah*, (NJ: L. Erlbaum Associates, 1998).

II. Definition of Peer–assisted Learning

Who may be described as a "peer"? A peer is an equal in standing or rank, a matched companion (Murray, 1970)[6]. A peer is a group member who is similar in one or several ways, such as age, experience, education level, ability, or cultural background. Broadly, a peer is someone of the same social standing, while a peer group consists of those of the same status with whom one interacts (Falchikov, 2001)[7]. In higher education, peers are students at a similar age and educational level. Peer–assisted learning (PAL) is "the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions" (Topping & Ehly, 1998, p.1)[8]. Most teachers would agree with the saying that the best way to learn is to teach. This applies to all students equally. PAL is an educational practice in which students interact with each other not only to attain their common academic goals but also to enhance their intrapersonal and interpersonal relationships. PAL refers to a set of alternative teaching arrangements in which students serve as instructional assistants for classmates and/or other children (Maheady, Harper, & Mallette, 1991).[9] PAL is an educational practice in which students interact with other students to attain educational goals (De Lisi & Golbeck, 1999)[10]. PAL could take place in every classroom, from K to 12, or in colleges. Druckman and Bjork (1994, p.96-97)[11] pointed out the differences in applying PAL among grade students (K to 12) and adult students, such as in the colleges. First, they stated, the difference is the context. Compared with grade schools, middle schools, and high schools, adult courses in colleges "are usually of shorter duration and faster paced, leaving much less instructional time for cooperative activities." Second the difference concern materials and tasks. Adult materials are at a higher level of complexity. That means PAL in adult courses requires more comprehension and memorization. Third, the

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[6] Murray, J. A. H. *The shorter Oxford English dictionary on historical principles (3rd ed.)*, (Oxford: Clarendon Press, 1970).

[7] Falchikov, N. op. cit.

[8] Topping, K. J. & Ehly, S. W. (Eds.) op. cit., p.1.

[9] Maheady, L., Harper, G. F., & Mallette, B., "Peer-mediated instruction: A review of potential applications for special education," *Journal of Reading, Writing, and Learning Disabilities International*, Vol.7, No.2 (1991), pp.75-103.

[10] De Lisi, R. & Golbeck, S. L. Implications of Piagetian theory for peer learning. In A. M. O'Donnell & A. King (Eds.), *Cognitive perspectives on peer learning, Mahwah*, (NJ: L. Erlbaum, pp.3-37, 1999).

[11] Druckman, D. & Bjork, R. A. (Eds.). *Learning, remembering, believing: Enhancing human performance*, Washington, (DC: National Academy Press, 1994).

difference is learner characteristics. Compared with children, adult students are at higher cognitive development stages and "are more socially sophisticated and skilled."

PAL can be traced back to Socrates, Plato, Aristotle, and their colleagues (Topping & Ehly, 1998)[12]. Martin and Arendale (1992)[13] regard the PAL model as a developmental perspective, and as applying concepts derived from Piaget's constructivist model of cognitive development (Piaget, 1971)[14].

In practice, teachers who are interested in the ideas of peer–assisted learning often faced many different approaches and models of PAL. Falchikov (2001)[15] states "literature on peer tutoring contains a plethora of curiously applied terminology". (p.7) Regardless of the diverse terminology and divergent technical approaches of peer tutoring, the researcher in this study describes the theory as peer–assisted learning (PAL) in the same level involving one institution to the participants, the college EFL learners in Taiwan, to clarify the ideas and enhance favorable understanding for the students.

III. Models of PAL

According to Topping and Ehly (1998)[16], there are several PAL methods, such as peer tutoring, peer modeling, peer education, peer counseling, peer monitoring, and peer assessment. Furthermore, Falchikov (2001)[17] states that PAL "schemes currently found in higher education may be characterized in a variety of ways" (p.7). Among the varieties of peer tutoring or PAL, Falchikov (2001)[18] pointed out that the following four main categories of peer tutoring are found in higher education:

◎ same–level peer tutoring where participants within a cohort have equal status;

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[12] Topping, K. J. & Ehly, S. W. (Eds.) op. cit., pp.

[13] Martin, D. C. & Arendale, D. R. *Supplemental Instruction: Improving First-Year Student Success in High-Risk Courses*, Columbia, (SC: National Resource Center for the Freshman Year Experience, University of South Carolina, 1992. ERIC Document Reproduction Service No. ED354839).

[14] Piaget, J. *Science of education and the psychology of the child*, (D. Coltman, Trans; London: Longman, 1971).

[15] Falchikov, N. op. cit.

[16] Topping, K. J. & Ehly, S. W. (Eds.) op. cit.

[17] Falchikov, N. op. cit.

[18] Ibid.

◎   same–level peer tutoring involving one institution where unequal status is introduced by the coordinator.

◎   cross–level peer tutoring involving one institution where unequal status derives from existing differences between tutors and tutees;

◎   cross–level peer tutoring involving two institutions (p.9).

Under the four categories in higher education, Falchikov (2001)[19] details 25 approaches in steps such as rationales/objectives, participants' characteristics, how does it work, outcomes, applications, and/or other useful references. These 25 technical approaches are as follows:

A. Same–level peer tutoring within a cohort
- Cooperative note–taking pairs
- Peer coaching
- Peer monitoring
- Think–pair–share and think–pair–square
- Three–step interview
- Flashcard tutoring

B. Same–level peer tutoring involving one institution
- Dyadic essay confrontations
- The learning cell
- Pair–problem–solving
- Reciprocal peer tutoring (RPT)
- Reciprocal teaching
- Scripted cooperative dyads (SCD)

Peer tutoring approaches relating to improving writing program
- Collaborative writing and peer review
- Paired annotations
- Peer editing
- Peer response groups
- Peer criticism: the Brooklyn Plan

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[19]Ibid.

C. Cross–level peer tutoring within an institution
- Supplemental instruction (SI)
- Mentoring
- Proctoring or the Personalized System of Instruction (PSI)
- Cognitive apprenticeships

D. Cross–level peer tutoring involving two institutions
- Napier student tutoring scheme: tutoring for credit
- Guided reciprocal peer questioning (RPQ)
- The jigsaw classroom and jigsaw II
- Structured academic controversy (SAC)

Under the specification of "participant characteristics", the participants have included:
◎ Librarians who teach
◎ Students of introductory social psychology
◎ Pre–service teachers
◎ Students studying psychological theories of human development
◎ Undergraduate students of psychology
◎ Students in an arithmetic course
◎ Students in abnormal psychology
◎ Psychology majors studying a course in statistics and research methods of psychological inquiry
◎ Students from "high–risk" courses such as engineering, medicine, dentistry, pharmacy, law, and computing
◎ Any students in higher education.

There is one approach that mentioned the ESL (English as Second Language) writing class among the 25 technical approaches. There are few studies of PAL in the field of EFL learning and teaching.

Next, the following summarizes "outcomes" under the above four categories (Falchikov, 2001)[20].

Category A (same–level peer tutoring within a cohort):

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[20]Ibid.

◎ strengthen collegial relationships, increase participant confidence and encourage added instructional innovation" (p.11)

◎ "the peer monitoring group outperformed the traditional group" (p.12).

◎ "Most students valued co–operative methods, and stated their intentions to use them in their own classrooms" (p. 13).

Category B (same–level peer tutoring involving one institution):

◎ "The learning cell has been found to lead to significantly better performance than the traditional system" (p. 19)

◎ "Postgraduate students find the technique challenging and satisfying" (p.17)

◎ "All hypotheses were supported. Pair–problem–solving students were found to have decreased maths anxiety and improved attitudes towards themselves as students of mathematics. " (p.21)

◎ "the technique fulfills its aims and objectives" (p.23)

◎ "RPT resulted in higher examination scores and lower levels of subjective distress than control conditions" (p.22)

Category B (peer tutoring in writing program):

◎ "Participants identified working in groups as one of the best things about the writing course" (p. 33)

◎ "All recommended using peer response groups again."

◎ "More proof reading was carried out and more errors were corrected than in previous single–author work" (p. 29).

Category C (cross–level peer tutoring within an institution):

◎ "improves students grades, reduces drop–out rates, and provides a forum for learning essential study strategies and developing skills in comprehension, analysis, critical thinking and problem solving" (p.39).

◎ "Improved student attitudes towards the content area were observed" (p.45).

◎ "Students showed increased awareness of metacognitive processes, along with improved approaches to in–class problem solving."

Category D (cross–level peer tutoring involving two institutions):

◎ "Many students reported satisfaction and a sense of achievement at being able to help others and do something useful (p.49).

◎ "Jigsaw team participants seemed to have developed a higher level of understanding of strategy use than the traditionally taught controls" (p.56).

From the above statements on the outcomes of PAL, these studies have presented a rather one–sided account featuring the favorable outcomes of peer learning. Based upon the specifications of participants and outcomes, more research is needed.

IV. Praises for PAL in Schools and Classrooms

The positive outcomes of cooperative learning structures have been widely documented over the last several decades. Some advocate that two general PAL approaches, cooperative learning and peer tutoring, have emerged as particularly appealing instructional alternatives for the 21st century classroom. (e.g., Delquadri, Greenwood, Whorton, Carta & Hall, 1986[21]; Maheady, 1998[22]). Peer–assisted learning has been reported to be effective for improving reading fluency and comprehension for grade school students who are low and average achievers, as well as for students with learning disabilities. (Fuchs, Fuchs, Mathes, & Simmons, 1997)[23]. Peer–assisted learning has shown great promise as an effective supplement to conventional teaching methods to "promote critical reading skills and accommodate the increasingly diverse student population and academic diversity in today's classrooms" (McMaster, Fuchs & Fuchs, 2002, p.245)[24]. For this effectiveness, PAL has been awarded "best practice" status by U.S. Department of Education's Program

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[21] Delquadri, J., Greenwood, C. R., Whorton, D., Carta, J. J. & Hall, R. V. "Classwide Peer Tutoring," *Exceptional Children*, Vol.52, No.6 (1986), pp.535-542.

[22] Maheady, L., Advantages and disadvantages of peer-assisted learning strategies. In K. J. Topping & S. W. Ehly (Eds.), *Peer–assisted learning*, (Mahwah, NJ: L. Erlbaum Associates, pp.45-65, 1998).

[23] Fuchs, D., Fuchs, L. S., Mathes, P. G., & Simmons, D. C., op. cit., pp.174-206.

[24] McMaster, K. L., Fuchs, D. & Fuchs, L. S. "Using peer tutoring to prevent early reading failure," in J. S. Thousand, R. A. Villa & A. Nevin (Eds.), *Creativity and collaborative learning: the practical guide to empowering students*, teachers, and families (2nd ed.). (Baltimore, MD: Paul H. Brookes Pub, 2002).

Effectiveness Pannel (Fuchs, Fuchs, Thompson, Al Otaiba, Yen., Yang, et al., 2001)[25]. Maheady (1998) [26] pointed out the educational advantages associated with peer–tutoring programs, such as demonstrating the significant academic benefits when utilized on a same–age (Cohen, Kulik, & Kulik, 1982)[27], cross–age (Osguthorpe & Scruggs, 1986) [28], and classwide (Fuchs, Fuchs, Mathes & Simmons, 1997[29]; Greenwood, Carta & Maheady, 1991[30]) basis; increasing the students' frequencies of positive social interactions (Franca, Kerr, Reitz, & Lambert, 1990[31]; Maheady & Sainato, 1985[32]); reducing the students' levels of inappropriate behavior (Folio & Norman, 1981)[33]; significantly decreasing truancy and tardiness rates (Lazerson, Foster, Brown & Hummel, 1988) [34]; and showing improved self–concepts and attitudes toward school and enhancing racial relations (Jenkins & Jenkins, 1981)[35]. Table 1 (Topping & Ehly, 1998, p.15)[36] gives a presentation of benefits for the students, the teachers, and system levels. In addition, Maheady (1998)[37] argues that PAL serves "as useful vehicles for individualizing instruction on a whole group basis, and simultaneously accommodating more cultural, linguistic, and instructional

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[25]Fuchs. D., Fuchs, L. S., Thompson, A., Al. Otaiba, S., Yen, L., Yang, N. J., et al. "Is reading important in reading–readiness programs? A randomized field trial with teachers as program implementers," *Journal of Educational Psychology*, Vol.93, No.2 (2001), pp.251-267.

[26]Maheady, L. op. cit., pp.45-65.

[27]Cohen, P. A., Kulik, J. A., & Kulik, C. L., "Educational outcomes of tutoring: A meta–analysis of findings." *American Educational Research Journal*, Vol.19, No.2 (1982), pp.237-248.

[28]Osguthorpe, R. T. & Scruggs, T. E., "Special education students as tutors: A review and analysis," *Remedial and Special Education*, Vol.7, No.4 (1986), pp.15-25.

[29]Fuchs, D., Fuchs, L. S., Mathes, P. G., & Simmons, D. C., op. cit., pp.174-206.

[30]Greenwood, C. R., Carta, J. J., & Maheady, L.. Peer tutoring programs in the regular education classroom. In G. Stoner, M. R. Shinn & H. M. Walker (Eds.), *Interventions for achievement and behavior problems*, (Silver Spring, MD: National Association of School Psychologists, 1991), pp.179-200.

[31]Franca, V. M., Kerr, M. M., Reitz, A. L. & Lambert, D. "Peer tutoring among behaviorally disordered students: Academic and social benefits to tutor and tutee," *Education and Treatment of Children*, Vol.13, No.2 (1990), pp.109-128.

[32]Maheady, L., & Sainato, D. M., "The effects of peer tutoring upon the social status and social interaction patterns of high and low status elementary school students," *Education and Treatment of Children*, Vol.8, No.1 (1985), pp.51-65.

[33]Folio, M. R. & Norman, A., "Toward more success in mainstreaming: A peer teacher approach to physical education," *Teaching Exceptional Children*, Vol.13, No.3 (1981), pp.110-114.

[34]Lazerson, D. B., Foster, H. L., Brown, S. I. & Hummel, J. W., "The effectiveness of cross–age tutoring with truant, junior high school students with learning disabilities," *Journal of Learning Disabilities*, Vol.21, No.4 (1988), pp.253-255.

[35]Jenkins, J. R. & Jenkins, L. M. *Cross age and peer tutoring: Help for children with learning problems*, (Reston, VA: Council for Exceptional; Children ERIC Document Reproduction Service No. ED199992), 1981.

[36]Topping, K. J. & Ehly, S. W. (Eds.), op. cit., p.15.

[37]Maheady, L. op. cit., pp.45-65.

diversity within a common setting" (p.50). Houston and Lazenbatt (1996)[38] also emphasize that peer tutoring is designed to "ensure that students develop personal transferable skills such as teamwork, leadership, problem–solving and communication skills" (p.251–52).

Table 1

Purported Advantages of PAL over Traditional Teacher–Led Instructional Approaches Across Student, Teacher, and System Levels

Teaching Factor–Educational Outcome

Student Level

Higher academic achievement

- Standardized achievement tests
- Curriculum–specific measures
- Higher levels of cognitive reasoning
- More frequent generation of new ideas and solutions
- Greater transfer of learning across time and settings

Improved interpersonal relationships

- Increased liking among students
- More acceptance of individual differences (i.e., racial, cultural, linguistic and exceptionality–based groups)
- More frequent positive social interactions within and outside of school

Enhanced personal and social development

- More positive self–concepts and feelings of self–worth
- More favorable attitudes toward school, learning, and specific academic disciplines

More positive learning environment

- More favorable students–teachers ratios
- Increased amounts of active student engagement
- More frequent opportunities to respond
- More frequent and immediate feedback on academic performance (i.e. both corrective and positive feedback)
- Increased opportunities for assistance and support

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[38]Houston, K. & Lazenbatt, A. "A peer–tutoring scheme to support independent learning and group project work in mathematics," *Assessment & Evaluation in Higher Education*, Vol.21, No.3 (1996), pp.251-266.

Motivation

- Preferred teaching arrangement over teacher–led or student–regulated options
- More fun and increased opportunities to socialize with peers

<u>Teacher Level</u>

Instructional

- Procedures for individualizing instruction without constant demands on teacher time
- Techniques for expanding one's instructional repertoire
- Strategies designed to accommodate diverse learning groups
- Approaches for facilitating academic integration of students from special and remedial education settings (e.g., inclusion and mainstreaming)
- Increased opportunities to observe and monitor individual student performance

Classroom management

- Strategies for teaching new, socially appropriate classroom behavior
- Procedures for reducing inappropriate academic and interpersonal behavior

Training and implementation requirements

- Initially high effort for "start up," low to moderate maintenance efforts
- Relatively explicit and non–time consuming training requirements
- Low to moderate curriculum adaptations required
- Strategies can be utilized in multiple curriculum areas
- Relatively cost effective

<u>System Level</u>

- Comprehensive set of strategies for enhancing student achievement
- Collection of interventions for facilitating inclusion, improving general classroom discipline, and preventing academic failure
- Procedures for enhancing faculty's instructional capacity
- Vehicle for promoting educational reforms (e.g., inclusion, merger of special and general education programs)
- Cost effective instructional interventions

Source: Topping & Ehly, 1998, p. 51.

Within a variety of higher level learning contexts, King (1999)[39] mentioned that peer learning groups could mediate their own learning through three discourse

patterns: complex knowledge construction (King, 1989[40], 1994[41]), problem solving (King, 1991), and peer tutoring (King, 1997[42]; King et al., 1998[43]). King emphasized that from a "Vygotskian perspective on learning, the social contexts provide a learning arena for the development of individual's cognitive abilities" (King, 1999, p. 87)[44]. That is to say, learning is socially constructed during interaction and activity with others. The interaction also provides opportunities for individuals to model their patterns of reasoning, thinking strategies, and problem–solving skills on those of their peers. Eventually, such high level learning discourse would consist of "thought–provoking questions, explanations, speculations, justifications, inferences, hypotheses, and conclusions" (p.88). In this article, King also offered thought–provoking questions, either comprehension questions, connection questions, or integration questions to start with. King's "ASK to THINK — TEL WHY" tutoring model (p.107) would be beneficial for PAL learners. (Note: "ASK to THINK – TEL WHY" and "ASK to THINK" are registered trademarks and the tutoring procedure itself is copyrighted by Alison King, 1991 and 1994.)[45]

Furthermore, as for enhancing effective group work, Druckman and Bjork (1994, p. 145)[46] stated in detail components of successful team training among the group members. They are:

1. conceptual understanding;

2. applying conceptual understanding;

3. procedural learning;

4. feedback;

5. social support;

6. relevant attitudes;

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[39]King, A. Discourse patterns for mediating peer learning. In A. M. O'Donnell & A. King (Eds.), *Cognitive perspectives on peer learning*, (Mahwah, NJ: L. Erlbaum, 1999), pp.87-115.

[40]King, A. "Effects of self–questioning training on college students' comprehension of lectures," *Contemporary Educational Psychology*, Vol.14, No.4 (1989), pp.366-381.

[41]King, A. "Guiding knowledge construction in the classroom: Effects of teaching children how To question and how To explain," *American Educational Research Journal*, Vol.31, No.2 (1994), pp.358-368.

[42]King, A. "ASK to THINK–TEL WHY®©: A model of transactive peer tutoring for scaffolding higher level complex learning," *Educational Psychologist*, Vol.32, No.4 (1997), pp.221-235.

[43]King, A., Staffieri, A. & Adelgais, A. op. cit., pp.134-152.

[44]King, A. op. cit., p.87.

[45]King, A. "Effects of training in strategic questioning on children's problem–solving performance," *Journal of Educational Psychology*, Vol.83, No.3 (1991), pp.307-317; King, A. "Guiding knowledge construction in the classroom: Effects of teaching children how To question and how To explain," *American Educational Research Journal*, Vol.31, No.2 (1994), pp.358-368.

[46]Druckman, D. & Bjork, R. A. (Eds.) op. cit., p.145.

7. positive professional identity among team members; and

8. behavioral models.

These team training components are the factors that facilitate PAL strategies in the classroom. During the PAL session, observing skilled team members engage in a procedure or skill can promote interactive learning. Most individuals prefer cooperative over competitive and individual learning experiences (Johnson & Johnson, 1989).

Alexander Astin (1993)[47] also emphasized the peers' influence on one another and concluded that "the student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (p. 398). Furthermore, compared with the boring lecture style as suggested by Leary, Rogers, Canfield, and Coe (1986. p. 970)[48] in the following table 2, peer–assisted learning helped build positive classroom influences upon students.

Table 2

Components of a Boring Lecture Style

Dimension	Forms and Behavioral Indicators
Passivity	Adds nothing new to the course; doesn't express opinions; unresponsive to classroom circumstances; format of class and lecture is predictable; reacts minimally to student questions
Tediousness	Low rate of activity; lectures at a sluggish pace; rambles; goes into too much detail; pauses a long time before responding to questions.
Distraction	Easily sidetracked into talking about topics that are irrelevant and not interesting; excited by trivial details; uses inappropriate body language; uses a great deal of slang.
Low affectivity	Lack enthusiasm; speaks in a monotone voice; makes little eye contact; shows little emotion; few facial expressions
Boring ingratiation	Awkwardly tries to impress others; tries too hard to be funny, nice, friendly
Seriousness	Doesn't smile or laugh; flat affect; rarely uses humor in lecture; pompous
Negative egocentrism	Complains about class, students, text, classroom,

[47]Astin, A. W. *What matters in college? Four critical years revisited*, (San Francisco: Jossey–Bass, 1993).

[48]Leary, M. R. Rogers, P. A. Canfield, R. W. & Coe, C. Boredom in interpersonal encounters: "Antecedents and social implications," *Journal of Personality and Social Psychology*, Vol.51, No.5 (1986), pp.968-975.

	university; acts bored, disinterested; not interested in what others say
Self–preoccupation	Talk about self too much; often reveals personal problems, difficulties; includes questions on test about self
Banality	Interested in only one topic; talks about trivial; superficial things; repeats dull stories and jokes; avoids all controversial topics

V. Disadvantages of PAL

Maheady (1998)[49] also pointed out the disadvantages of PAL strategies. These include the fact that teachers must be prepared for the additional time required to maintain effectiveness and accuracy in the use of peer–assisted methods, and that the use of PAL has to do with the amount of content coverage possible during teacher–led versus peer–assisted learning methods. The disadvantages include required adaptations to curricular materials, and ethical concerns including accountability, peer competence, and informed consent (Greenwood, Terry, Delquadri, Elliott, Arreaga–Mayer, 1995)[50]. Table 3 shows specific concerns and potential disadvantages of PAL (Topping & Ehly, 1998)[51]. Cohen, Boud and Sampson (2001)[52] also stated that "inappropriate assessment practices in a course can destroy desirable forms of peer learning no matter how well it is otherwise constructed" (p. 249). It is understandable that if the students are in direct competition with each other for grades then it would be difficult to encourage them to cooperate in peer learning. Mutual understanding should be clearly stated between the teacher and students, and between students when beginning to conduct PAL strategies, to avoid the misleading point of view and situations, such as "[t]his promises to be a real 'fun' semester. I have three classes that require group work. I just hate it when I have to depend on the other people for my grade" (Feichtner & Davis, 1985)[53].

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[49]Maheady, L. op. cit., pp.45-65.

[50]Greenwood, C. R. Terry, B. Delquadri, J. Elliott, M. & Arreaga–Mayer, C. *ClassWide peer tutoring (CWPT): Effective teaching and research review. Kansas City*, (KS: Juniper Gardens Children's Project, University of Kansas, 1995).

[51]Topping, K. J. & Ehly, S. W. (Eds.), op. cit., p.54.

[52]Cohen, R. Boud, D. & Sampson, J. Dealing with problems encountered in assessment of peer learning. In N. Falchikov (Ed.), *Learning together: Peer tutoring in higher education*, (New York: RoutledgeFalmer, 2001), pp.248-253,

[53]Feichtner, S. B. & Davis, E. A. "Why Some Groups Fail: A Survey of Students' Experiences with Learning Groups," *Organizational Behavior Teaching Review*, Vol.9, No.4 (1985), pp.58-74.

Table 3

Purported Disadvantages of PAL Strategies Compared to Teacher–Led Instruction

Teaching Factor/ Educational Outcome	Mediator	
	Teacher	*Peer*
Peer training requirements	Few	Many
Quality control requirement	Few	Many
Content coverage	Good	Variable
Curriculum adaptation	Few	Variable
Ethical concerns	Few	Increased
Theoretical concerns about appropriateness and effectiveness	Few	Increased

Source: Topping & Ehly, 1998, p.54

Hativah (2000)[54] also mentioned problems in conducting active discussions in classes, such as low student participation, students' impression that they do not learn much from discussion, negative emotional reactions to discussion, and low expertise of discussion participants.

"Absenteeism" is the most critical problem associated with peer learning since it is a general problem in higher education and particularly relevant to working with pairs or cooperative learning. Even though district and counties have policies and laws (nationwide in Taiwan) about student attendance and the teacher's obligation to the student, in one regular class, for instance, a student out for prolonged absences through illness or other officially excused reasons misses all the discussions and daily activities that take place in the authentic class. Why do some students miss PAL sessions? What can be done about it? We will explore this issue later. Students with special needs are entitled to some adaptations that will help them succeed within their current program. It is important for the teacher to know what services or other accommodations the students is entitled to so they don't come into conflict with the regular obligations.

Reluctant students struggle for different reasons and thus need different strategies to help them improve. English as a foreign language (EFL) students, for instance, are still learning the language and the American/British culture, so they have

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[54] Hativah, N. *Teaching for effective learning in higher education*, (Boston: Kluwer Academic Publishers, 2000).

considerable trouble with some of the books teachers ask them to read. They are overcome by the complexity of the text: too many things are going on within the writing and story itself. Burke (2003)[55] stated clearly that "what unifies all these (struggling) readers is the anxiety that their reading limitations will make them appear dumb or otherwise embarrass them in front of their peers." (p. 88) Table 4, derived from Feichtner and Davis (1985)[56], offers clear guidelines and advice to minimize problems associated with learning in a group.

Table 4

Minimizing Problems Associated with Learning in a Group

Problem area	Guidelines and advice
Reluctant students	Think carefully about why you are planning to use group learning
(1) Rationale	Communicate your rationale to students
(2) Student expectations	Help students develop realistic expectations about their roles and that of the teacher
Structuring groups	Structure groups carefully:
	• 4–7 member groups tend to do best • Permanent groups are better than temporary ones • Heterogeneous groups formed by the instructor are better than homogeneous student–selected groups
Preparation	Be 'meticulously prepared'
Group activities	It is important to have enough of these to ensure some development of group cohesion, but too many (and particular types, e.g.

[55]Burke, J. *The English teacher's companion: A complete guide to classroom, curriculum, and the profession*, 2nd edition. Portsmouth, (NH: Heinemann, 2004).
[56]Feichtner, S. B. & Davis, E. A. op. cit, pp.58-74.

	presentations and group reports) tend to be associated with poor student experiences. Fechtner and Davis (1985) suggest: • Design activities likely to be perceived as relevant to course content. • A variety of activities will help achievement of course objectives and increase group cohesion. • Give a series of group exams. • Provide the opportunity to work on group assignments in class.
The role of the teacher	Try to listen in on groups as they work together in class. This allows for the early detection of errors or group problems. It 'also seems to provide them (students) with a visual demonstration that we're still doing our job'.
Grading	Provide grade incentives. Aim for between 21% and 40% group–work con to course assessment grade.

Derived from Feichtner and Davis (1985)[57]

VI. PAL in English as a Foreign Language Writing Program

Since the adoption of the process approach to teaching English composition in the 1980s, peer–assistance has been used by many teachers in the first–language (L1) and second or foreign language (L2) writing classrooms. Several studies (eg. Lazar, 1995[58], Bruffee, 1984[59]) have shown that peer–assistance improves writing, and helps students develop the ability to diagnose problems in the text, monitor their writing process, and develop audience awareness.

However, some research shows that peer response fails to improve writing. Carter (1982)[60] and Wunsch (1980)[61] noted that college students who received extensive practice in peer evaluation did not outperform those without such training.

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[57]Feichtner, S. B. & Davis, E. A. op. cit.

[58]Lazar, A. M. "Who is studying in groups and why?: Peer collaboration outside the classroom," *College Teaching*, Vol.43, No.2 (1995), pp.61-65.

[59]Bruffee, K. A., "Collaborative learning and the "conversation of mankind." *College English*, Vol.46, No.7 (1984), pp.635-653.

[60]Carter, R. D., By itself peer group revision has no power: Paper presented at the Annual Meeting of the National Council of Teachers of English (72nd, Washington, DC, November, pp.19-24, 1982). (ERIC Document Reproduction Service No. ED226350).

[61]Wunsch, D. R., *The effects of individualized written feedback, rewriting, and group oral feedback on business letter writing ability*, Unpublished doctoral dissertation, University of California, Los Angeles, 1980.

Some researchers have doubts about college students' ability to help their peers with revising their writings (Pianko & Radzik, 1980[62]; Ziv, 1983[63]). Even if students learn what is wrong with their text from their peers, they might have difficulty transferring their peers' suggestions into effective revisions (Rubin, 1983[64], Lee, 2005[65]).

As suggested from the above research, the efficacy of peer–assistance as a way to develop writing skills is still debatable in both L1 and L2 situations. Furthermore, in the L2 context, there have been very few studies on if peer–assistance is effective or the studies of the impact of PAL for EFL students in Taiwan.

VII. Composition of Groups in PAL

How are the pairs/groups formed? Usually there are several ways to implement AL strategies, such as students' choice, instructor's choice, or a combination (e.g., one instructor collected data on students' research interests and then grouped those with similar preferences). Feichtner and Davis (1985)[66] stated that the composition of the groups has a significant impact on their success or failure in the learning process (p. 59). Their study showed that students are more likely to have positive experiences in classes where groups are either formed by the instructor or by a combination of methods. Mandel (2003) [67]expressed the same concerns. He stated

> The first crucial variable in ensuring successful cooperative work groups is the way in which the students are organized. The composition and size of the unit can readily enhance or sabotage the overall goals of the learning experience (p.9).

[62]Pianko, S. & Radzik, A. "The Student Editing Method," *Theory into Practice*, Vol.19, No.3 (1980), pp.220-224.

[63]Ziv, N. D., "Peer groups in the composition classroom: A case study," Paper presented at the 34th Annual Meeting of the Conference on College Composition and Communication, Detroit, MI, March 17-19, 1983. (ERIC Document Reproduction Service No. ED229799).

[64]Rubin, D. "Evaluating freshman writers: What do students really learn?" *College English*, Vol.45, No.4 (1983), pp.373-379.

[65]Lee, L. "Differential Impact of Peer Editing on Students, Writing Performance: A Case Study," The Third Conference on Mandarin/English as a Second Language Reading and Writing Teaching at National Central University, (2006), pp.17-32,.

[66]Feichtner, S. B. & Davis, E. A. op. cit, pp.58-74.

[67]Mandel, S. M. *Cooperative work groups: Preparing students for the real world*, (Thousand Oaks, CA: Corwin Press, 2003).

Furthermore, one study mentioned that gender, as well as group size, seating arrangement, role assignment, textbook use, and individual testing could be among the elements contributing to the performance of PAL strategies (Heller & Hollabaugh, 1992)[68].

VIII. What is Unknown Regarding PAL

Peer–assisted learning has a rich empirical and pragmatic history, although most of the systematic work has focused on children. There has been substantially less peer–assisted learning research conducted with adults than with children. Yet gradually more and more peer–assisted learning has been widely implemented, not only in elementary schools but also at university level in different fields in many countries, such as in the college of medicine of China Medical University in Taiwan.

However, there are very few research studies of PAL, especially qualitative research studies, for English as a Foreign Language (EFL) learners and educators in Taiwan. For example, research studies of peer–assisted learning in the areas of EFL learners' learning behavior, learning style, learning anxiety, teacher–student relationship, interpersonal relationship, the meaning of their experience, and cultural impact on the learners themselves are lacking and have not been widely explored. Furthermore, only those who have actually taught English as Foreign Language classes in Taiwan would visualize and conceive the scene of forty, fifty, even sixty students learning together in one single classroom. However, the theory of peer–assisted learning has not taken the reality of large class size into consideration yet.

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[68]Heller, P. & Hollabaugh, M. "Teaching problem solving through cooperative grouping, part 2: Designing problems and structuring groups," *American Journal of Physics*, Vol.60, No.7 (1992), pp.637-644.

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同儕互助學習之本質與主題理論探討

李麗秋[*]

摘　要

　　本篇研究目的在於釐清對「同儕互助學習」模式之負面誤解，並整理與評述過去十數年來西方學者在有關「同儕互助學習」的定義、概念、理論和方法的發展，並提出本人的補充。「同儕互助學習」模式近年來在英語寫作課程教學中頗受歡迎，並在許多西方國家已被證實相當成功。此篇文章以 Falchikov 同儕教學及 Fuchs 的合作學習理論說明組織中的團體學習行為，整合及分析研究，以及提出「同儕互助學習」模式之基本定義和規畫實行步驟的方法，涵蓋從小學至高等教育體系的教育從業人員和諮商輔導老師實務運作上可能面對問題時的因應之道；此外，藉由教學以及班級行為管理的同儕調解程序，探討「同儕互助學習」的實行策略以及如「同層次互助學習」和「跨層次互助學習」等多種模式。相關文獻，如「同儕互助學習」之優點及缺失，學員分組的問題及其實施時可能的替代方案，透過表格呈現，提供有助於教育實務及創新的另一學習策略。再者，「同儕互助學習」應用在英語為外語的寫作課程，及其他在過去文獻中未提及的議題亦在本文中提出探討。

關鍵詞：同儕互助學習、同層次互助學習、跨層次互助學習、英語為外語課程

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