

Original Paper

Application of Lev Vygotsky's Sociocultural Approach to Foster Students' Understanding and Learning Performance

Mammy M. Helou, PhD^{1*} & Linda K. Newsome, Ed.D²

¹ Macquarie University, Sydney, Australia

² Arizona State University, Phoenix, United States

* Mammy M. Helou, Macquarie University, Sydney, Australia

Received: October 25, 2018 Accepted: November 8, 2018 Online Published: November 19, 2018

doi:10.22158/jecs.v2n4p347

URL: <http://dx.doi.org/10.22158/jecs.v2n4p347>

Abstract

The current study endeavours to explore the application of the Vygotskian sociocultural approach to students' cognitive development, particularly as related to the employment of experiential and peer learning, from both teacher and student perspectives. This is followed by a discussion of the inferences made in relation to the contributions of experiential and peer learning as salient educational delivery modes. As such, a presentation of teachers' recounts about learning to teach, and students' reflections on teaching to learn are provided. Finally, the current study concludes with: 1) Insightful erudition learning and teaching curves impacting students' performance, retention and progression; and 2) Directions for future research in the area.

Keywords

Experiential learning, peer education, Lev Vygotsky, Vygotskian sociocultural approach, students' understanding, students' performance, students' retention, students' progression

1. Introduction

The traditional "Godly" approach to education, whereby the teacher is the expert on all issues, is no longer practicable in today's international educational environment. Given current collaborative and peer teaching approaches, students can no longer be considered as passive recipients, and the teacher as the source of all wisdom (Helou, 2005), whereby any failure to learn gets attributed to student faults either in relation to their character, or their mental and academic abilities.

Teaching is viewed as a multi-dimensional activity which encompasses designing, organising and supervision of harmonious activities, as well as planning and implementing delivery techniques and assessments, all of which aim at ensuring student learning. *Experiential learning encompasses a*

common-sense approach whereby students learn by doing, i.e., as a teaching approach, it relates to students having to acquire and apply knowledge, as such, the salience of work-integrated learning. When combined with both *peer learning* and *e-learning*, a stronger emphasis can then be placed on critical analysis and lateral thinking, as opposed to reciting and rehashing textbook material and lecture notes.

Accordingly, the current study evaluates the salient contributions of Lev Vygotsky as well as discusses the implications of employing experiential and peer learning in classroom settings. Teachers' recounts and students' reflections are presented on the benefits of the application of experiential and peer learning as prominent modes of instruction.

2. Literature Review: The Sociocultural Perspective and the Vygotskian Approach to Teaching and Learning

With an increasing commitment to enhance the understanding of the context of cognitive development, various approaches have been employed to examine the relationship between the individual and their social world (Rogoff, 1990; Tryphon & Voneche, 1996). This includes the sociocultural theory, which emphasises the role of development through cooperative interactions between students and more capable individuals within their environment (Woolfolk & Margretts, 2007).

A main endorser of the sociocultural theory was Lev Vygotsky (Woolfolk & Margretts, 2007), who elaborated on problems of learning and the development of the mind (Vygotsky, 1978). Vygotsky suggested two approaches to mediation through another individual (Brown, Metz, & Campione, 1996). First, he believed that knowledge is co-constructed, as such, intellectual identity arises from functional utility through the process of internalisation (Smith, 1996). This has been expressed in his statement that "...every function in the child's cultural development appears twice: first, on the social level, and later on the individual level; first between people (interpsychological), and then inside the child (intrapsychological)" (Vygotsky, 1978, p. 57). Secondly, Vygotsky focused on the role of the others as mediators of meaning, whereby, social settings create zones of proximal development that initially operate in the context of shared interactions, but gradually get internalised and become part of the learner's critical independent developmental achievement. This again is depicted in his statement that "only through the other do we become ourselves" (Vygotsky, 1978, p. 144). Several studies have been undertaken by contemporary researchers to further develop Vygotsky's notions (John-Steiner & Soubberman, 1978; Karpov & Bransford, 1995).

Rogoff and Morelli's (1989) findings indicated that investigations of the role of culture in cognitive development allow enhancing the understanding of human adaptation. Furthermore, Rogoff (1990) examined the relationship between students' individual thinking and development processes and the cultural context within which social interactions involving collaborative problem-solving take place. Findings indicated that social interactions with and among students provide guidance, support, direction and impetus for cognitive development. Furthermore, findings also showed that cultural

variation in relation to the tasks learned underline the importance of learners' roles in participation in social activity.

Recent studies support the sociocultural theory in that interactions between individuals form a basis for linguistic development, which, in turn, are central to the transmission and internalisation of knowledge (Zukow-Goldring & Ferko, 1994). Furthermore, John-Steiner and Mahn (1996) explained that the experiences students bring in with them contribute to the literacy acquisition process. In addition, Tharp's (1989) further explained that sociolinguistics varies by culture in ways that are differently compatible with the expectations of educational institutions.

Rogoff's (1990) findings in relation to guided participation indicated that participation with more capable peers facilitates learners' skills and enhances motivation, creativity, imagination and opportunities for elaboration. Furthermore, findings also showed that peer learning promotes greater conceptual gains for students, thus, encouraging a stronger persistence in learning.

Cooper (2002) reported that in a positive educational environment, the teachers' stance as role models and mentors, and their choice of task and dialogue in the peer learning classroom represent vital elements in affecting successful implementation of student learning. Furthermore, insightful studies also report that the provision of elaborated help and effectively matching the guided peer learning approach to the requirements of the learning task, as well as, the teacher's ability and willingness to move between different points on a teacher-centered to student-centered learning continuum, are all potentially powerful approaches in promoting high-level of cognitive processing (King, 2002).

Drawing on the above studies, it is worthwhile to note that different measures and approaches were employed in different research studies leading to a range of interpretations and applications of the Vygotskian sociocultural perspective and the contributions of experiential and peer learning in the classroom. For example, while some studies have employed secondary school, college and university students; others have used learners with special educational needs, or students from various cross-cultural backgrounds.

3. Method

The present study aims to expand the understanding of the link between cognitive development and its application in classroom settings. To this effect, a series of focus group sessions were held to identify aspects of university educators' and students' recounts, view and reflections in relation to the application of the Vygotskian framework, especially as related to the employment of experiential and peer learning to cognitive development, exchange and elaboration of knowledge and effective teaching. To this end, thirty (30) educators and forty-six (46) students were engaged in the focus group sessions. After discussions ended, and both educators' and students' responses were collected, the contents of the feedback obtained were analysed and inferences were made. To facilitate the process of making such inferences, the obtained data was then collated based on the themes that emerged as a result. Accordingly, participants' responses were thematised into three main categories relating to the

relationship between cognitive development and the students' social sources of individual thinking, the role of language as a cultural tool, and the impact of aided participation, experiential and peer learning.

4. Result: Sources of Individual Thinking, Language and Aided Participation

The first emerging theme related to the link between cognitive development and the students' environments, cultural backgrounds and social sources of thinking. Ninety one percent (91%) of the participants mainly argued that the student's cultural background was a major differentiating factor in terms of the various methods in which they learn. This can be depicted by the statements, such as, "...students with Anglo-Saxon backgrounds tend to work better in small groups ... whereas some Asian students feel shy, ... I think it is all based on the student's individual cultural background". Furthermore, these participants further argued that interaction with members of their society and general environment positively contribute to their attitude toward education, thus, enhances their overall learning experience.

The second theme related to the participants' views in relation to the link between language as a cultural tool and learning. The great majority of participants, amounting to ninety seven percent (97%) agreed on the salience of language as a tool that allows students to interact, communicate, exchange views, elaborate on previously attained knowledge, and, thus, better understand the subject matter and further engage in their learning experiences.

The third theme related to the participants' views in relation to assisted and collaborative learning. Eighty nine percent (89%) of the participants heavily supported the role of assisted and collaborative learning, as evidenced by such views relating to the use of scaffolding, to assist students to reach a goal. Furthermore, eighty six percent (86%) of the participants reflected on the importance of experiential learning and peer tutoring in the design of classroom seating so that a less able student would be supported by a more able peer. In addition, seventy nine percent (79%) of the participating educators agreed on the importance of using scaffolding based on students' needs.

5. Discussion

As anticipated, the data obtained in this study supports the results of previous researchers (Rogoff, 1990; Tryphon & Voneche, 1996), in that interactions with members of society and college environment heavily impact students' cognitive development, conceptual abilities, levels of motivations and their persistence in learning. The educator's practices in terms of the classroom activities, assessments, aided learning techniques and student interactions are synergistic with Vygotsky's notions and views on cognitive development and learning.

Findings in relation to the first emerging theme, namely that cultural development, is linked to students' interactions with members of their culture and educational environment support the Vygotskian notions on the social sources of individual thinking. This further confirms previous research results of Rogoff (1990). As such, it is essential for the educator to have a good grasp of students' respective cultural

backgrounds. The results of the current research in relation to the role of language as a cultural tool impacting learning, and the way sociolinguistics varies by culture in ways that may not be coherent with the expectations of tertiary institutions, also support Vygotsky's views on the salient role of language and its crucial effects on cognitive development. This conclusion further confirms previous research results of Zukow-Goldring and Ferko (1994), and Tharp (1989).

Furthermore, as students are of culturally diverse backgrounds, it might be helpful for tertiary institutions to continue to escalate the use of communication technology and computers to assist in students' English academic language proficiency, especially when it comes to overseas students. Furthermore, the results related to the impact of more capable peer aided participation on the conceptual capabilities of students, and their learning, also support Vygotsky's views in that assisted learning requires scaffolding by a more capable peer. Both educators' and students' views on cognitive self-instruction and apprenticeships clearly represent the Vygotskian framework. This is also supportive of previous research results (Cooper, 2002; King, 2002; Kouzulin & Presseisen, 1995). As such, it is of the essence for educators to be conscientious of the assisted learning requirements of students as opposed to merely and blindly sticking to a set syllabus, as a means of realising set learning outcomes. Results also clearly indicated that students with different cultural backgrounds have different preferences for methods of instruction and learning. These results agree with the findings of Rogoff and Morelli (1989). The teaching implications of these findings relate to the need for efficient and effective curriculum design, development and implementation of academic programs that address less capable and culturally diverse students' needs.

5.1 Learning to Teach: Educators' Recounts

As per the inferences made based on teachers' recounts, it is the view here that good teaching entails a wide-range experience in material delivery, an explicit teaching philosophy, the practice of responsive teaching and teaching innovation, especially in relation to the development and coordination of subjects and programs of study, effective supervision of the programs offered at both the undergraduate and postgraduate levels, effective use of student consultation and informal teaching sessions, among other indicators.

A basic practical principle of learning is that of common sense, that is, people learn by doing. Thus, a main philosophy of acquiring and using knowledge relates to *experiential learning* (Biggs, 1999; Ramsden, 1992; Sampson & Cohen, 2001a, 2001b), along with a strong emphasis being placed on critical analysis and lateral thinking (Cannon, 1992; Hativa, 2000), as opposed to pure *teacher learning* (Prosser & Trigwell, 1999).

Teaching encompasses designing, organising and supervision of harmonious activities, delivery techniques, and assessments, all of which aim at ensuring student learning. This allows various forms of experiential learning to be administered, including the choice of delivery methods aimed at motivating and capturing students' attention and active engagement, techniques for encouraging class discussion, and processes which encourage elaboration with previous course work and students'

personal experiences. Furthermore, the adoption of experiential learning allows for the experimentation with various teaching techniques, innovation with new methods of content delivery, evaluation of how well the innovation works with the students and adaptations as need be, thus, overall enhancing the teaching skills over time. Embracing peer reviews and student feedbacks through student evaluations or otherwise, and listening to the remarks generated in the process, aid in the development of enhanced teaching skills over the years.

In addition, student advising, and informal face-to-face consultations are extremely valuable in making student learning possible. This enables teachers to spot students' poor areas of comprehension with subject contents and intervene to fill in the gaps in their learning, as need may be, and encourage them to actively engage with the subject contents and forthcoming class activities.

In terms of research supervision, experiential learning allows for mentoring and preparing students to meet the set expectations and requirements ahead of them, and providing advice and suggestions, as opposed to merely transmitting information and telling them what to do. In this sense, the supervision exercise significantly contributes to the supervisor's learning in as much as it advances students' research skills and knowledge in their relative research areas, and keeps up their levels of motivation, interest and emotional excitement (Delamont, Atkinson, & Perry, 1997). It is the view here that the enhancement of teaching and learning is a rather dynamic process, i.e., it is never ending in the sense that educators continue to learn and improve on their teaching skills with time. Accordingly, the saying that "a teacher is a student for life", is indeed true.

5.2 Teaching to Learn: Students' Reflections

From a student perspective, *experiential learning* provides by far more opportunities for the student to experiment over time and learn by doing, as opposed to pure traditional didactic and authoritative teacher learning or transmission of subject contents, where the student is considered a passive recipient, and the teacher/expert is the source of all wisdom (Brookfield, 1990; Ramsden, 1992). Furthermore, with the traditional telling of information/knowledge, any failure to understand and learn is mostly attributed to student faults, as determined by their personality traits and/or capabilities (Biggs, 1999).

Students do not just learn from their teacher, or from their own previous experiences, but they also learn from and with each other (Wilson, 2001). Hands-on peer learning strategies, including group term-projects, undertaking critical analysis of papers published in internationally refereed journals, group oral presentations, role plays of allocated case study scenarios, and peer assessments are extremely helpful in encouraging active student participation (Cohen & Sampson, 2001), thus, enhance the learning experience. Furthermore, it is also helpful if students are encouraged to keep a learning journal for group work activities (Sampson & Cohen, 2001), and, if possible, have the student outcome assessed by student groups themselves, a larger class group, as well as the lecturer/guest lecturer(s) (Bennington & Moss, 2001; Morgan, Dunn, Parry, & O'Reilly, 2004).

As per the reported findings above, both peer reviews and student feedback comments in relation to the outcome of group work, and informal peer learning strategies, adopted in previously taught

undergraduate and postgraduate subjects include: “It has been challenging”, “it allowed us to brain storm and take risks as a group which individually we may not have taken”, “it provided us with the opportunity to try new things”, “it was good to learn about different cultural perspectives to the same issues discussed”, and “group work has helped us to learn and know one another in terms of our individual strengths and weaknesses, which facilitated the allocation of tasks among each other”. Even though difficulties may surface among members within small groups, educators were of the view that informal peer learning remains an invaluable approach to effective teaching. Furthermore, students were of the opinion that learning can be facilitated using collaborative small group work, as, in their view, it provides the opportunity to experience informal peer learning, allows for brain storming, and provides the opportunity to undertake group oral discussions and presentations. They further emphasised that it also enables students to learn from each other’s experiences, and to a large extent, help them to express their views in terms of providing and receiving feedback from one another.

6. Conclusion: Fostering Students’ Understanding and Learning Performance

The aim of the current study is to enhance the understanding of the context and links of cognitive development and the use of experiential and peer learning. To this end, this study explored the application of the socio-cultural framework in teaching, understanding and learning. In this regard, it is crucial to note that the three emerging themes stemming out of this study as discussed above are not isolated but overlapping and interlinked.

One methodological criticism that could be made of this study is that the participants involved in this study, in terms of both educators and students, were randomly selected from a higher level educational institution. Future research could overcome this problem by involving a considerable number of educators and students from various tertiary institutions located in areas having different multicultural blends and socio-economic conditions. This allows to undertake a comparison of their respective teaching practices and views on cognitive development and learning.

Overall, even though far more has been written about the Vygotskian framework, and its application in today’s classrooms, than can be discussed in the current study, it can be concluded that this study supports previous findings that the Vygotskian approach, and the application of the socio-cultural theory, have heavily contributed to understanding the context of cognitive development, student learning and the development of the mind. Given the abovementioned views on the sociocultural approach to teaching, understanding and learning, it can be concluded that the adoption of experiential and peer learning allows for the administration of both sides of the coin, namely that of *teaching to learn* and *learning to teach*.

References

- Bennington, L., & Moss, S. (2001). Self, Peer and Tutor Assessments of Oral Presentations. *International Journal of Management Literature, 1*, 81-90.
- Biggs, J. (1999). *Teaching for Quality Learning at University: What the Student Does*. Buckingham: Open University Press.
- Brookfield, S. D. (1990). *The Skilful Teacher: On Technique, Trust and Responsiveness in the Classroom*. San Francisco: Jossey-Bass Publishers.
- Brown, A. L., Metz, K. E., & Campione, J. C. (1996). Social Interaction and Individual Understanding in a Community of Learners: The Influence of Piaget and Vygotsky. In A. Tryphon, & J. Voneche (Eds.), *Piaget-Vygotsky: The Social Genesis of Thought*. East Sussex: Psychology Press.
- Cannon, R. (1992). *Lecturing*. HERDSA Green Guides No. 7. Campbelltown: Higher Education Research and Development Society of Australasia.
- Cohen, R., & Sampson, J. (2001). Implementing and Managing Peer Learning. In D. Boud, R. Cohen, & J. Sampson (Eds.), *Peer Learning in Higher Education: Learning from & With Each Other*. London: Kogan Page Limited.
- Cooper, M. A. (2002). Classroom Choices for Enabling Peer Learning. *Theory into Practice, 41*, 53-57. https://doi.org/10.1207/s15430421tip4101_9
- Delamont, S., Atkinson, P., & Perry, O. (1997). *Supervising the PhD: A Guide to Success*. Buckingham: Open University Press.
- Hativa, N. (2000). *Teaching for Effective Learning in Higher Education*. Dordrecht: Kluwer Academic Publishers.
- Helou, M. (2005). Imagery, Perception and Learning: Contributions of Rene Descartes and the "Cartesian Dualism". *The International Journal of Learning, 12*, 161-164. <https://doi.org/10.18848/1447-9494/CGP/v12i03/47655>
- John-Steiner, V., & Mahn, H. (1996). Sociocultural Approaches to Learning and Development: A Vygotskian Framework. *Educational Psychologist, 31*, 191-206. <https://doi.org/10.1080/00461520.1996.9653266>
- Karpov, Y. V., & Bransford, J. D. (1995). L.S. Vygotsky and the Doctrine of Empirical and Theoretical Learning. *Educational Psychologist, 30*, 61-66. https://doi.org/10.1207/s15326985ep3002_2
- King, A. (2002). Structuring Peer Interaction to Promote High-Level Cognitive Processing. *Theory into Practice, 41*, 33-39. https://doi.org/10.1207/s15430421tip4101_6
- Kouzulin, A., & Presseisen, B. Z. (1995). Mediated Learning Experiences and Psychological Tools: Vygotsky and Feuerstein's Perspectives in a Study of Student Learning. *Educational Psychologist, 30*, 67-75. https://doi.org/10.1207/s15326985ep3002_3
- Morgan, C., Dunn, L., Parry, S., & O'Reilly, M. (2004). *The Student Assessment Handbook: New Directions in Traditional & Online Assessment*. London: Routledge.
- Prosser, M., & Trigwell, K. (1999). *Understanding Learning and Teaching: The Experience in Higher*

- Education*. Buckingham: Open University Press.
- Ramsden, P. (1992). *Learning to Teach in Higher Education*. London: Routledge.
- Ramsden, P. (2003). *Learning to Teach in Higher Education*. London: Routledge.
- Rogoff, B. (1990). *Apprenticeship in Thinking*. New York: Oxford University Press.
- Rogoff, B., & Morelli, G. (1989). Perspectives on Children's Development from Cultural Psychology. *American Psychologist*, 44, 343-348. <https://doi.org/10.1037/0003-066X.44.2.343>
- Sampson, J., & Cohen, R. (2001a). Designing Peer Learning. In D. Boud, R. Cohen, & J. Sampson (Eds.), *Peer Learning in Higher Education: Learning from & With Each Other*. London, Kogan Page Limited.
- Sampson, J., & Cohen, R. (2001b). Strategies for Peer Learning: Some Examples. In D. Boud, R. Cohen, & J. Sampson (Eds.), *Peer Learning in Higher Education: Learning from & With Each Other*. London: Kogan Page Limited.
- Smith, L. (1996). The Social Construction of Rational Understanding. In A. Tryphon, & J. Voneche (Eds.), *Piaget-Vygotsky: The Social Genesis of Thought*. East Sussex: Psychology Press.
- Tharp, R. G. (1989). Psychocultural Variables and Contrasts: Effects on Teaching and Learning in Schools. *American Psychologist*, 44, 349-359. <https://doi.org/10.1037/0003-066X.44.2.349>
- Tryphon, A., & Voneche, J. (1996). Introduction. In A. Tryphon, & J. Voneche (Eds.), *Piaget-Vygotsky: The Social Genesis of Thought*. East Sussex: Psychology Press.
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge: Harvard University Press.
- Wilson, J. T. (2001). Project Management Teams: A Model of Best Practice in Design. In D. Boud, R. Cohen, & J. Sampson (Eds.), *Peer Learning in Higher Education: Learning from & With Each Other*. London: Kogan Page Limited.
- Woolfolk, A., & Margetts K. (2007). *Educational Psychology*. Frenchs Forest: Pearson Education Australia.
- Zukow-Goldring, P., & Freko, K. R. (1994). An Ecological Approach to the Emergence of the Lexicon: Socializing Attention. In V. John-Steiner, C. P. Panofsky, & L. W. Smith (Eds.), *Sociocultural Approaches to Language and Literacy: An Interactionist Perspective*. New York: Cambridge University Press.