

Facilitating Internalization in E-Learning through New Information System

Mehri Farzaneh

Payame Noor University
Mehri.farzaneh@gmail.com

Mostafa Movahed

Payame Noor University
sehrparsd@gmail.com

Abstract

This paper aims to study Vygotsky's (1987) sociocultural theory of learning with respect to how it relates to technology-based second language learning and teaching. The researchers selected their participants from advanced students from Payame Noor University. We divided the participants into two groups- an experimental group and a control group. After teaching the course an experimental group was asked to continue practicing language in an online learning environment, whereas those in the control group were not told anything about practice procedure. We found that students' engagement in an interactive group activity in the online learning can be a useful approach to facilitating and motivating internalization, learning, and better performance.

Keywords: E-learning, Internalization, Social Activity, Interaction, Cognition

1. Introduction

Vygotsky's view of Sociocultural Theory (1987) has played an important role in the process of learning and mental development. The view is based on the way in which cultures, values, beliefs, traditions and skills of a social group are transferred to the next generation. The theory focuses on children cognitive development and argues that the development of human cognitive and higher mental function comes from social interactions (Aimin, 2013; Tharp & Gallimore, 1988) and that the process of the development higher mental functioning is the one by which people internalize or regulate what they learn from social activities (Aimin, 2013). Vygotsky (1987) believed that the origin of human cognitive development is not based on physical maturity, rather it is rooted in social and cultural factors and these factors act through language and social interaction. According to Dillenbourg (1994), when an individual participates in a social system, the culture of this social system and the tools used for communication, especially the language, shape the individual's cognition, and constitute a source of learning. Internalization is a central concept in this approach (Dillenbourg, 1994; Lantolf & Thorne, 2006). Furberg (2009) demonstrated the value of the sociocultural theory for gaining a better understanding of students' engagement with web-based learning environments. Remtulla (2008) focused on social theory and its relationship with a socio-culturally engaged look at e-learning for workplace and pedagogy. This comprehensive collection of research offers linguistic scholars, language teachers, students, and policymakers a better understanding of the importance and influence of e-learning in second language acquisition. In this article, we will study the pedagogical application of sociocultural perspective in online learning environments.

Facilitating Internalization in E-Learning through New...

The work of Lev Vygotsky (1934) has become the foundation of much research and theory in cognitive development over the past several decades, particularly of what has become known as Social Development Theory. Vygotsky's theories stress the fundamental role of social interaction in the development of cognition (Vygotsky, 1978), as he believed strongly that community plays a central role in the process of "making meaning". Unlike Piaget's notion that children's development must necessarily precede their learning, Vygotsky argued, "learning is a necessary and universal aspect of the process of developing culturally organized, specifically human psychological function" (1978, p. 90). In other words, social learning tends to precede (i.e., come before) development. Vygotsky has developed a sociocultural approach to cognitive development. According to Vygotsky (1978 cited Lantolf 2000), the sociocultural environment presents the learner with a variety of tasks and demands, and engages the learner in his world through the tools. In the early stages, Vygotsky claims that the learner is completely dependent on other people. Vygotsky (1978 cited Wertsch 1985) states that the learner acquires knowledge through contacts and interactions with people as the first step (interpsychological plane), then later assimilates and internalises this knowledge adding his personal value to it (intrapsychological plane). This transition from social to personal property according to Vygotsky is not a mere copy, but a transformation of what had been learnt through interaction, into personal values. Vygotsky claims that this is what also happens in schools. Students do not merely copy teachers' capabilities; rather they transform what teachers offer them during the processes of appropriation. Vygotsky (1978 cited Lantolf 1994) argues that the field of psychology has deprived itself of crucial information to the understanding of complex aspects of human behaviour by refusing to study consciousness.

2. Method

The participants in this study were 50 Iranian female university students, ages ranged between 21 and 26 years. They were all majoring in English Translation at Payame Nour University of Khorasgan, Isfahan. Allen's (2004) placement test was used to determine participants' level of proficiency. The researchers selected the study participants from advanced students according to their performance on the test. We divided the subjects into two groups, an experimental group and a control group. Both groups were taught in exactly the same way based on the research objectives. After teaching the course, subjects who were randomly assigned to an experimental group were asked to continue practicing language in an online learning environment, whereas those in the control group were not told anything about practice procedures. The purpose of this procedure was to determine whether the online practice approach was appropriate for learning and eventually internalizing the second language. We used a combination of materials in this study. Allen's (2004) placement test was used to determine participants' level of proficiency. Besides the Placement Test of Dave Allen (2004), the subjects were received a TOFEL test, (1991) as a criterion to determine the effectiveness of the online practice. The collected data were analyzed through Statistical description for social science (SPSS, version 13.0). Descriptive analysis in the form of percentage was computed. The purpose of this procedure was to determine whether the online practice approach was appropriate for learning and eventually internalizing the second language.

3. Result

This study was set out to study the relationship between online practices of students and their performance on the achievement test, taking into account their language proficiency level. Our hypothesis was that the engagement of students in online learning environments helps them succeed in learning and eventually internalizing the second language. The descriptive analysis of the two groups (the mean, and the standard deviation) is reported in tables (1) and (2). Since in this particular study we were particularly interested in the significant of the online learning environment, we compared the means of the two groups. As you know, internalize learning is to make benefit from collaborative learning. Collaborative learning is based upon the principle that students can enrich their learning experiences by interacting with others and benefiting from one another's strengths. In collaborative learning situations, students are responsible for one another's actions and tasks which encourages teamwork as well. The results of this study indicate that there is a significant relationship between student-student interaction and practice in the online learning and their performance on the achievement test.

Table 1. Descriptive Statistics (Group A)

Variable	N	Min	Max	Mean	Std. Deviation
Writing	25	13.00	20.00	17.2400	1.39284
Reading	25	11.00	15.00	11.8800	.97125
Listening	25	10.00	16.00	12.3600	1.46856
Speaking	25	10.00	19.00	17.4400	1.78139

Table 2. Descriptive Statistics (Group B)

Variable	N	Min	Max	Mean	Std. Deviation
Writing	25	10.00	16.00	12.2400	1.66533
Reading	25	11.00	15.00	11.8800	.97125
Listening	25	10.00	16.00	12.3600	1.46856
Speaking	25	10.00	15.00	11.9200	1.28841

The relevant means of the two groups are shown in Tables 1 & 2. As we can see the mean scores of the two groups are significantly different from one another. Clearly, the mean for those in group A was substantially higher than those in group B, especially in the case of writing and speaking. This indicates that the experimental group (Group A) has slightly improved from pre- to post-test compared to the control group (Group B).

4. Discussion

The findings of the study suggest that online learning is an effective way for increasing social interaction. They also clarify that scaffolding conversations with conscious members of the community play a fundamental role in the development of cognition, and help children learn ways of thinking (Forward, 2005; Turuk, 2008; Olivaraes, 2012). According to Vygotsky ‘the higher mental faculties’ are internalized forms of social interaction particularly language use (Vygotsky, 1991). Vygotsky argues that children learn to reason by internalizing the logical structure of ‘scientific concepts’ as these are found in the culture and taught to them in school (Vygotsky, 1987). We found that student-student interaction and practice in the online learning environment can be a useful approach to facilitating and motivating internalization, learning and eventually better performance. Furthermore, the social interaction in an online community makes learning intuitive and more interesting for students. The

Facilitating Internalization in E-Learning through New...

objectives of the study were: (1) to investigate the effectiveness of implementing online cooperative learning strategy for the better development of students especially in the scope of writing and speaking skills; (2) to prepare English language learners who have problems in speaking and writing for academic as well as social success. The present study revealed that social community is as an effective strategy for developing students' speaking and writing skills because students engagement or involvement in an ongoing online discussion atmosphere, offer them the opportunity to improve interactional and productive skills, and eventually internalize the second language.

5. Conclusion

Finally from the social-cultural perspective, the integration of social, cultural and biological elements plays a vital role in learning processes. Vygotsky stresses the social nature of language learning, and holds that children acquire knowledge as a result of engaging in social experiences. For Vygotsky, social interaction, especially scaffolding conversations with conscious members of the community play a fundamental role in the development of cognition, and help children learn ways of thinking (Forward, 2005; Turuk, 2008; Olivaraes, 2012). Vygotsky held that when adults and more sophisticated peers help children to learn activities that are culturally significant, the relationship between them is part of children's thinking. After the children internalize important features of these talks, they can use their own inner language to guide their thinking and activities and learn new skills. In particular, Internalization is a central concept in Vygotsky's theory (Lantolf & Thorne, 2006) that is particularly important for second language learning. This study approve that the online practice approach was appropriate for learning and eventually internalizing the second language. After using an English achievement test as the criterion of this study, we found

that students' engagement and communication in an interactive group activity in the online learning environment can be a useful approach to facilitating and motivating internalization, learning, and better performance.

References

- Aimin, L. (2013). The study of second acquisition under socio-cultural theory. *American Journal of Educational Research*, 1(5), 162-167.
- Allen, D. (2004). Oxford placement test. Oxford: Oxford University Press.
- Dillenbourg, P. (1994). Internalization and Learning Environments. In S. Vosiadou, E. De Corte, & H. Mandl (Eds.), *Technology-based learning environments* (pp.48-54). Berlin/Heidelberg: Springer_Verlag.
- Forward, M., L. (2005). Linking Formative Assessment to Scaffolding.
- Furberg, A. (2009). Socio-cultural aspects of prompting student reflection in web-based inquiry learning environments. *Journal of Computer Assisted Learning*, 25(4), 397-409. doi: 10.1111/j.1365-2729.2009.00320.x
- Lantolf, J., & Thorne, S. (2006). Sociocultural theory and the genesis of second language development. Oxford, UK: Oxford University Press.
- Lantolf, J. P., & Appel, G. (1994). Theoretical framework: An introduction to Vygotskian approaches to second language research. In Lantolf J. P., (Ed.) *Vygotskian approaches to second language research* (pp.1-32). London: Ablex Publishing.
- Imberi-Olivares, K. A. (2012). The process of scaffolding in conversation: Who does it best and why?. *UC Merced*.
- Remtulla, K. A. (2008). A social theory perspective on e-learning. *Learning Inquiry*, 2(2), 139-149. doi: 10.1007/s11519-008-0032-6
- Research and Education Association (1991). The best test preparation for the TOFEL test of English as a foreign language.
- Tharp, R. G., & Gallimore, R. (1988). Rousing minds to life: Teaching, learning, and schooling in social context. Cambridge, UK: Cambridge University Press.
- Turuk, M. (2008). The Relevance and implications of Vygotsky's sociocultural theory in the second language classroom. *ARECLS*, 5, 244-262.

- Vygotsky, L. S. (1934). (Vol 1). *Problems of general psychology*. New York: Plenum Press. Original work published, 39-285.
- Vygotsky, L. (1991). The Genesis of Higher Mental functions. In P. Light, S. Sheldon, & B. Woodhead (Eds.), *Learning to think* (pp. 34-63). London: Routledge.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. S. (1987). Thinking and speech. In R. W. Rieber & A. S. Carton (Eds.), *The collected works of L.S. Vygotsky* (pp. 39-285). New York: Plenum Press. (Original Work Published 1934).
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wertsch, J. (1985). *Vygotsky and the social formation of mind*. UK: Harvard University Press.