

On the Relationship between Constructivist Classroom Environment and the Development of Translation Competence: A Study of Iranian Translation Studies Students

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Abstract

Constructivism, the cognitive meaning making theory, is still of interest among academics. It plays an important role in translation competence of translation studies students. However, few studies have been conducted to reveal a significant relationship between these two. The purpose of this study is to examine the relationship between the translation competence and constructivist classroom environment. A sample of 300 translation studies students were selected randomly. Two used instruments were Constructivist Translation Classroom Environment Survey (CTLES) and Translation Competence Questionnaire (TCQ). The results showed that the higher the students of translation studies constructivist classroom environment (CCE), the higher their translation competence (TC). Accordingly, there is a significant positive relationship between the students TC and CCE.

Keywords: Translation competence, constructivism, strategic competence, psycho-physiological competence, extra-linguistic competence, classroom environment, translation studies

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1. Introduction

Zemelman, Daniels & Hyde, (1993) state that Constructivism is a theory, used to elucidate how people know what they know. The basic idea is that problem solving is at the soul of learning, thinking, and development. As people solve problems and determine the consequences of their actions—through reflecting on previous and instant experiences—they construct their own understanding. This learning theory describes the process of knowledge construction. Though constructivism is a learning theory, it is the application of what are often referred to as "constructivist practices" (Zemelman, Daniels & Hyde, 1993) in the classroom and elsewhere that provide support for the knowledge construction process.

Constructivism is a cognitive and meaning-making learning theory signifying that individuals construct or make their own new considerations based upon the interaction between their existing knowledge and beliefs and new phenomena with which they come into contact (Richardson, 1994). A social constructivist perspective assumes that learners are active and creative, interacting with other students and the environment. Students teach each other while instantaneously learning new notions (Hausfather, 1996). Students jointly accomplish goals that they could not have performed individually. Cooperative learning is, therefore, an important part of constructivism.

The general sense of constructivism is that it is a theory of learning or meaning making, that individuals create their own new understandings on the basis of an interaction between what they already know and believe and ideas and knowledge with which they come into contact (Resnick, 1989). The process of constructing one's knowledge can involve both cognitive (Cunningham, 1997) and physical constructions (Harel & Papert, 1991) of meaning, through the development of mental models or schemas (Johnson-Laird, 1980), as well as physical or virtual representations of knowledge (McClellan, 1996).

Within constructivism there are different notions of the nature of knowledge and the knowledge construction process. Moshman (1982) has identified three types of constructivism: exogeneous constructivism, endogenous constructivism and dialectical constructivism. In exogenous constructivism, as with the philosophy of realism, there is an external reality that is reconstructed as knowledge is formed. Thus one's mental structures develop to reflect the

organization of the world. The information processing conceptualizations of cognitive psychology emphasize the representation view of constructivism, calling attention to how we construct and elaborate schemata and networks of information based on the external realities of the environments we experience.

Endogenous constructivism or cognitive constructivism focuses on internal, individual constructions of knowledge (Cobb, 1994; Moshman, 1982). This perspective, which is derived from Piagetian theory (Piaget 1977, 1970), emphasizes individual knowledge construction stimulated by internal cognitive conflict as learners strive to resolve mental disequilibrium. Essentially, children as well as older learners must negotiate the meaning of experiences and phenomena that are discrepant from their existing schema. Students may be said to author their own knowledge, advancing their cognitive structures by revising and creating new understandings out of existing ones. This is accomplished through individual or socially mediated discovery-oriented learning activities.

Dialectical constructivism or social constructivism (Brown, Collins, & Duguid, 1989; Rogoff, 1990) views the origin of knowledge construction as being the social intersection of people, interactions that involve sharing, comparing and debating among learners and mentors. Through a highly interactive process, the social milieu of learning is accorded center stage and learners both refine their own meanings and help others find meaning. In this way knowledge is mutually built.

This view is a direct reflection of Vygotsky's (1978) sociocultural theory of learning, which accentuates the supportive guidance of mentors as they enable the apprentice learner to achieve successively more complex skill, understanding, and ultimately independent competence. The fundamental nature of social constructivism is collaborative social interaction in contrast to individual investigation of cognitive constructivism. Through the cognitive give and take of social interactions, one constructs personal knowledge. In addition, the context in which learning occurs is inseparable from emergent thought. This latter view known as contextualism in psychology becomes a central tenet of constructivism when expressed as situated cognition. Social constructivism captures the most general extant perspective on constructivism with its emphasis on the importance of social exchanges for cognitive growth and the impact of culture and historical context on learning.

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In recent years, it is believed that the potential contribution of constructivism to FL teaching and teacher training should be considered seriously (Skrinda, 2004). In line with constructivism methodology, the shift has been from the learner as a passive recipient of language forms to an active and creative language user who engages in meaningful activities in an effort to construct his own knowledge related to the target language and to communicate effectively in L2.

Since the last decades there has been an argument that constructivist classroom environment affects English as a foreign language learners' language competence. It might affect the EFL learners' translation competence (TC). In the scope of translation studies, TC has more to do with performance. TC is mostly described as a complex concept which requires knowledge of two or more languages and usually consists of two or more sub-competencies.

TC is a multifaceted concept that includes "passive" elements (related to knowledge) and an active element. The active element (transfer) consists of procedures and strategies that are used while working on the translation task at hand. The transfer element is superordinate; it employs and activates all the other "passive" sub-components. Moreover, the nature of TC is open-ended; there is no finite stage to arrive at. Yet, TC can be developed and can integrate certain tools, which translators may acquire both through theory and practice. In turn, translation competence becomes the basis that influences methods or strategies, which translators use while working on their tasks (Orozco & Albir, 2002).

Regardless of how TC is defined, the developments in science and technology and the need to exchange the newly developed information, knowledge and technology in native speakers' countries highlight a deep demand to train professional translators. One of the requirements of training professional translators is to look more deeply into the translation professionalism. Development of translation competence has been called differently such as *Transfer Competence* (Nord, 1992), *Translational Competence* (Toury, 1995), *Translation Performance* (Wilss, 1989), and even *Translation Skill* (Lowe, 1987).

After that Orozco and Albir (2002) developed the instruments for measuring the process of acquiring translation competence in written translation. Translation competence and its process of acquisition were described, and then three measuring instruments especially developed to measure translation competence acquisition were presented: (I) to measure notions about

translation, (II) to measure students' behavior when faced with translation problems, and (III) to measure errors.

Despite the widespread application of constructivist principle in education as well EFL instruction on the one hand, and the importance of translation competence of the EFL learners and translators on the other hand, to the researcher's best of knowledge the relationship between the relationship (the impact of) CCE on the TC of the students of translational studies has not been appropriately investigated. The present study is an attempt to investigate the relationship between constructivist classroom environments and the development of translation competence of the Iranian students of translational studies.

1.1. Statement of the Problem

Through CCE learners are active and creative and interact with other learners and the environment. Students teach each other while simultaneously learning new concepts (Hausfather, 1996). Students therefore can accomplish goals that they could not have performed individually. Developing translation competence seems to be influenced by nature of teaching tasks and classroom environments. However, it is not clear whether the Iranian students of translational studies have the same positive perceptions about CCE. It is neither known whether Iranian students of Translational studies can develop their translation competence through constructivist classroom environments. Moreover, as CEE consists of five different components it is not clear which components of CCE more significantly predict the TC of the students of translational studies.

The present study has two main objectives. First, it aims at investigating the relationship CCE and the students' translation competence. The second objective is to determine which component of CCE (personal relevance, uncertainty, critical voice, shared control, and students' negotiation scales) can more significantly predict the students' translation competence components.

1.2. Significance of the Study

This study contributed to the body of knowledge by providing additional insight into the role of constructivist classroom environments in developing translation competence of the students of translational studies. Theoretically speaking, it is vital to understand how constructivist classroom environment is correlated with translation competence of the students. It

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is also of much significance to identify the most influential components of CCE which might directly or indirectly affect the development of TC. By understanding how constructivist teaching methods enhance the students' TC, translation teachers can develop an education program through which the students can engage in all teaching and learning activities. Therefore, the results of this study are valuable and significant because several groups of people including applied linguists, translational studies experts, translation teachers, and students of translation studies can practically apply the findings in order to contribute to the development of TC of the students' translation studies as well as the translators.

1.3. Research Questions

In line with the research objectives, the following research questions are raised:

1. Is there any statistically significant relationship between constructivist classroom environment and student's translation competence?
2. Do CCE components significantly predict the students' development of TC?

1.4. Research Hypotheses

The research hypothesis of the study can be stated as follows:

H01. There is no statistically significant relationship between constructivist classroom environment and development of student's translation competence.

H02. CCE components don't significantly predict the students' development of TC?

2. Methodology

2.1. Participants

The participants of the study were 300 students who studied translation studies in Allameh Tabataba'i University, Azad universities in Tehran, and Gonabad universities. Their age range varies between 19 and 21. They were all Iranian and they were all majoring the same. They were selected from three intact classes. The criterion for selecting the participants was

passing more than two-thirds of the translation courses at the university. The participants were all selected through convenience sampling.

2.2. Instruments

In the present study, two different instruments were used: Constructivist Translation Classroom Environment Survey (CTLES) developed by Ebrahimi (2013) and the Translation Competence acquisition (TCQ) developed by Alavi and Ghaemi (2013). They are explained in the following sections.

Constructivist Classroom Environment Questionnaire

This questionnaire consists of five scales of actual and preferred climate of constructivist translation classes which consists of five subscales as follows:

1. Personal relevance Extent to which school activities and knowledge is relevant to students' everyday out-of-school experiences.
2. Uncertainty Extent to which opportunities are provided for students to experience that knowledge is evolving and culturally and socially determined.
3. Critical voice Extent to which students feel that it is legitimate and beneficial to question the teachers' pedagogical plans and methods.
4. Shared control Extent to which students have opportunities to explain and justify their ideas and to test the viability of their own and other students' ideas.
5. Student negotiation Extent to which students share with the teacher control for the design and management of learning activities, assessment criteria, and social norms of the classroom

The reliability of the total scale and its components were estimated through running Cronbach. The reliability indices for the scale and its components are shown in table 3.1.

Table 1. The reliability indices for the scale and its components

	Cronbach A
Personal relevance	0.7

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Uncertainty	0.72
Critical voice	0.71
Shared control	0.73
Student negotiation	0.75
CCE	0.8

TC questionnaire with components

This scale was developed by Alavi and Ghaemi (2013). It consists of the following sections: 1) Strategic component, 2) Psycho-physiological component, 3) Bilingual component, 4) Instrument component, 5) Knowledge about translation component, and 6) Extra- linguistic component. The reliability of the total scale and its components were estimated through running Cronbach. The reliability indices for the scale and its components are shown in the following table:

Table 2

Reliability indices of Translation competence scale

	Cronbach A
Strategic component	0.75
Psycho-physiological component	0.76
Instrument component	0.81
Knowledge about translation component,	0.72
Student negotiation	0.73
Bilingual component	0.8
Extra- linguistic component	0.7
Total	0.82

As it is shown in the table 3.2, the internal consistency of all components of the translation competence is above 0.70 and the internal consistency of the instrument is 0.82.

Therefore, it could be claimed that there is acceptable internal consistency among the components of the instrument.

2.3. Research Design

This study enjoyed a correlational, exposed-facto design. The variables of the study were students' constructivist classroom environment and their translation competence. Constructivist classroom environment consists of different components. In the study, the components of constructivist classroom environment were considered as independent variables and the translation competence was considered as dependent variable.

2.4. Data Analysis

At first, the participants' scores on each variable of the CCE were computed. Also, the participants' scores on all items of CCE were transformed and computed. Then, the participants' scores on all items of TC instrument and different components of this instrument were computed and transformed. Pearson Product Correlation was run for estimating the relationship between the participants' scores on TC and CCE. Moreover, multiple regression analysis (Enter method) was run for determining the components of TC which significantly predict the participants' TC.

The main objectives of the present study were to at investigate the relationship between the students' CCE and their translation competence and to determine which component of CCE (personal relevance, uncertainty, critical voice, shared control, and students' negotiation scales) can more significantly predict the students' translation competence components.

3. Results

3.1. Relationship between Students' CCE and Their Translation Competence

In order to determine relationship between students' CCE and their translation competence, Pearson Product Moment Correlation was run. The results are shown in Table 4.1.

Table 3. Correlation Coefficient between students' CCE and their translation

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		CCE	TC
CCE	Pearson		
	Correlation	1	.766**
	Sig. (2-tailed)		.000
	N	200	200
TC	Pearson		
	Correlation	.766**	1
	Sig. (2-tailed)	.000	
	N	200	200

** . Correlation is significant at the 0.01 level (2-tailed).

As it can be seen in the above Table, there is a significant correlation between translation students' CCE and their translation competence [$R = 0.76$], $df = 200$, ($p = 0.001 < 0.05$). Therefore, it could be strongly argued that the first null hypothesis of the study is rejected and the alternative hypothesis is accepted.

3.2. Results of the Second Research Question

The second research question dealt with identifying the components of CCE which significantly predict the students' translation competence. In doing so, the data were submitted to multiple regression analysis, enter method. The results of regression analysis are shown in the following tables.

Table 4. Model summary of regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.853 ^a	.727	.715	9.32721

a. Predictors: (Constant), SN, CV, SC, PR, Uncertainty

As it can be seen, ($R= 0.85$, $R\text{ Square}= 0.72$, and $\text{Adjusted } R\text{ Square}= 0.71$). That is, the predictors (independent variables: SN, CV, SC, PR, and uncertainty) predicted 0.71 percent of the dependent variable (translation competence) variance.

Table 5. ANOVA for the significance of the regression equation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26399.6	5	5279.93	60.6	.001
	Residual	9917.648	194	86.9		
	Total	36317.3	199			

a. Dependent Variable: TC

As it can be seen from the above Table, the regression equation is significant [$F_{(5, 194)} = 60.6$, $p= 0.001 < 0.05$]. That is, at least one of the components of CCE can significantly predict the students' translation competence. From the following table, the variables which significantly predict the students' translation competence can be identified.

Table 6. Coefficients between TC and CCE components

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.923	12.535		.632	.529
	PR	8.557	.596	.790	14.352	.000
	Uncertainty	.994	.422	.131	2.354	.020
	CV	.184	.291	.031	.633	.528
	SC	4.104	.151	.034	3.686	.013
	SN	2.281	.340	.043	2.827	.041

a. Dependent Variable: TC

As it can be seen except for CV ($t= 0.63$, $p= 0.528 > 0.050$), the other variables can significantly predict the students' TC (p value of each is less than 0.05). Therefore, it could be strongly argued that the participants' PR, Uncertainty, SC, and SN can significantly predict the

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translation competence of the translation students and the students' critical voice does not predict their translation competence.

4. Discussion and Conclusion

The present study had two main objectives. The first objective was to identify the relationship between the participants' CCE and TC. The results of the study showed that there is a significant correlation between the CCE of the students of translations studies and their translation competence ($p > 0.05$). Therefore, it be strongly argued that the higher the translators' CCE, the higher their translation competence. Osberg (1997) argues that constructivism is an epistemological view of learning through which certain activities and enrichments in the environment can enhance the meaning-making process, such as active learning using kinesthetic, visual and auditory modalities, creating opportunities for dialogue, fostering creativity and providing a rich, safe and engaging environment. To put it simply, as translation is a complicated process which requires students' active participation in problem-solving and critical thinking and inquires the importance of taking responsibility in the decision-making process. It can be greatly affected by translation students' constructivist environment classroom.

The significant relationship between the translation competence and their CCE might be due to the fact that translation knowledge construction is based on building upon previous knowledge experiences. Thus, new knowledge is integrated with the previous intellectual constructs. Integration of such experiences is facilitated through social and collaborative natures of learning such as scaffolding (Darling-Hammond, 2000; Shunk, 1995). The results of the study also showed that among the components of CCE, except critical voice the other components significantly predicted the translation students' translation competence. There is no related study in the review of literature to support this finding. But, one possible justification is the high common variance between different components of CCE.

Based on the findings of the study, it could be concluded that the higher the students of translation studies CCE, the higher their translation competence. Therefore, in order to increase the students' translation competence, enhancing the CCE seems to be a practical solution.

Moreover, it could be concluded due to the importance of translators' TC, the administrators and translator trainers should do their best to enhance constructivist environment classrooms and as the results the translators' TC is indirectly enhanced.

Furthermore, as significantly predicted the students TC, teachers and translator trainers should lay more emphasis on these factors through either direct teaching or exposing the students' of translation studies to hidden curriculum through which these variables can be enhanced. Also, it could be concluded that translation competence as a complicated process can be easily measured through administering CCE instrument to the target population. Due to the nature of constructivism and its impact on learning and teaching the following conclusions can also be made:

- Learners should be encouraged to raise questions, generate hypotheses and test their validity.
- Learners should be challenged by ideas and experiences that generate inner cognitive conflict or disequilibrium. Students' errors should be viewed positively as opportunities for learners and teachers to explore conceptual understanding.
- Students should be given time to engage in reflection through journal writing, drawing, modeling and discussion. Learning occurs through reflective abstraction.
- The learning environment should provide ample opportunities for dialogue and the classroom should be seen as a community of discourse engaged in activity, reflection, and conversation.

The present study has some theoretical and practical implications. First of all, the overriding goal of the constructivist educator is to stimulate thinking in learners that results in meaningful learning, deeper understanding and transfer of learning to real world contexts. To accomplish this goal, a constructivist framework leads teachers to incorporate strategies that encourage knowledge construction through primarily social learning processes, in which students develop their own understanding through interactions with peers and the teacher. In addition, in order to make manifest and link new knowledge to learners' current understanding, the constructivist teacher selects authentic tasks and uses more ill-defined problems and higher order questions. A significant problem tackled by small groups of students promotes involvement, curiosity, and heightened motivation.

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Thus, it is desirable that constructivist lessons have a clear content goal designed around an authentic learning task, question or problem. The teacher must also select multiple ways of representing key ideas in the lesson, thereby providing students multiple ways of connecting, integrating and elaborating the new learning. By arranging for student interactions in conjunction with highly skilled, teacher questioning, teachers can promote students' thinking skills, guide students' learning, and assess students' learning as they learn. Students in constructivist classrooms are challenged to become more active learners, to interact with their peers and to always view learning as a search for meaning. At the same time, the teacher is challenged to know her learners, to observe and listen to their responses and thinking. The teacher must model effective thinking employ expert questioning, and otherwise, skillfully provide whatever learning guidance may be indicated to support the efforts of students to construct meaning from their classroom and life experiences. By following these guidelines, teachers and students will experience greater efficacy, as students take increasing responsibility for their learning and come to appreciate the satisfaction of meaningful learning.

Due to the limitations of the study, several areas were not covered. First of all, this was a quantitative study. The other researchers are strongly recommended to replicate the study using qualitative methods to see how the students of translation studies view the impact of constructivism on translation competence.

Secondly, the variable of gender might also be influential. The other researchers are strongly recommended to replicate the same study regarding the students' gender.

Thirdly, the other researchers are recommended to replicate the study with the translator trainers to see how they can apply the rules of constructivism in the translation classes.

Lastly, this was a correlation study and the components of the translation competence were not investigated separately. The other researchers are recommended to estimate the correlation between the components of CCE and all components of TC.

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