Applying The Constructivist Activities on Teaching English Literature (A Study is Conducted in Literature Class of English Education Department of Universitas Negeri Manado)

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Abstract

The aim of this research is to find out whether the constructivist theory is effective to enrich students' mastery of literary work or not. This research is classified as quantitative research which is true experimental design, the data collected in the form of numbers and the data statistically analyzed. In this research, the writer used a sample of students in the parallel class of English Education students in the 3th semester who had learned the subject of Introduction to Literature. One class randomly chosen from 4 classes as the experimental class and control class and the t-test observe used in analyzing the data. The research finding shows that students were given a pre-test to what extent they understood about English Literature, from the results obtained, it was known that there were differences in mastery of the field of literature in each individual. Then, the students are given treatment using the constructivist theory referring to the students' learning experiences about the work of English Literature, given exposure and then post-test results which can show the experimental group gets the majority of scores higher than the control group. This means that there are significant differences between students' interest in learning about English Literature has increased in mastery of the topic and the overall phenomena that accompany it. In other words, students who are taught using Constructivist theory master the topic or material better, even they can enjoy the learning process more than Students who are not taught using Constructivist theory.

Keywords: Constructivist theory; Learning; Students' mastery; Literature

INTRODUCTION

Humans generate knowledge and meaning from their interactions with other humans and their experiences. From infancy to adulthood, interactions and experiences reflect and build human's behavior patterns. When people assimilate, they incorporate the new experience into their existing framework without changing them into new one. This may occur when people's experiences are aligned with their internal representations of the world, but may also occur as a failure to change a faulty understanding, for example, they may not notice some events, misunderstood about other people opinions, and deciding an event as a fluke, therefore they assume that those events are unimportant information. In contrast, when people's experiences contradict their internal representations, they may

change their perceptions of the experiences to fit their internal representations, which is called as accommodation.

Accommodation is the process of reframing one's mental representation of the external world to fit new experiences. Accommodation can be understood as the mechanism by which failure leads to learning, when individuals act on the expectation that the world operates in one way and it violates their expectations, they often fail, but by accommodating this new experience and reframing their model of the way the world works, they learn from the experience of failure, or others' failure. As the participants of learning process, university students are considered as a unique individual with different needs and backgrounds or it could be seen as complex and Multi dimension.

University students must have knowledge of English they derived since they were in senior high school and junior high school. It can be said that the ability of learning English by university students is not a basic ability, because they have saved some vocabularies since they were in high school. Therefore, teachers must understand that students get the knowledge of English through their experience, because in the cognitive domain, students' experience influence their achievement in learning. The teaching method used by teachers usually started by guidebook or based on the curriculum, this causes obstacle in learning process so students cannot understand the knowledge well. Individuals are assumed to construct their own meanings and understandings, and this process is believed to involve interplay between existing knowledge and beliefs and new knowledge and experiences (Richardson, 1997; Schunk, 2004). Piaget believed that an individual encountering a new learning situation draws on prior knowledge to make the new experience understandable (Gillani, 2003)

Manado State University is one of universities in North Sulawesi. There is English education program in this university which receives many students from various province in Indonesia every year, whose certainly have various background of experience in learning English. Therefore, the use of constructivism theory in English learning process is proper to be considered. Constructivism is the latest teaching and learning theory in western countries, and it is based on the premise that cognition (learning) is the result of "mental construction". It emphasizes the aspects on the social-cultural of learning. Initially, we give a brief account of its learning and teaching theory, and then we discuss its pedagogical implications for English teaching in combination with its basic principle.

In the view of constructivist, learning is a constructive process in which the learners build an internal illustration of knowledge, personal interpretation of their experience. This representation is continually open to modification, its structure and linkages forming the ground to which other knowledge structures are attached. Learning is an active process in which meaning is accomplished on the basis of experience. This view of knowledge does not necessarily reject the existence of the real world, and agrees that reality places constrain on the existing concepts, but contends that all we know of the world are human interpretations of their experiences in the world. Conceptual growth comes from the sharing of various perspectives and the simultaneous changing of our internal representations in response to those perspectives as well as through cumulative experience (Bednar, Cunnigham, Duffy, & Perry, 1995). The fundamental challenge of constructivism is

changing the locus of control over learning from teachers to students. Educational technologists, with their foundations in behavioral psychology, have sought to design programs in such a way that students would be enticed to achieve pre-specified objectives.

Constructivism is a learning theory that emphasizes the active role of learners in building their own understanding. It is based on the idea that people actively construct or make their own knowledge, and that reality is determined by the learner's experiences. Constructivism is crucial for educators because it influences the way students learn, and teachers can use it to help students understand their previous knowledge. There are different types of constructivism, including cognitive constructivism, which focuses on the learner's stage of cognitive development, and radical constructivism, which emphasizes that all knowledge is personal and socially constructed. In a constructivist classroom, the teacher acts as a facilitator, working to understand the students' preexisting conceptions and adjusting teaching to match their level of understanding. Constructivism is an active learning process that involves mental engagement and the integration of new knowledge with existing knowledge. Constructivist learning environments (Brooks & Brooks, 1999; Gagnon & Collay, 2000; Howe & Berv, 2000; McCarty & Schwandt, 2000; Phillips, 2000) are established with the belief that learner control or autonomy (Vansteenkeiste, Simons, Lens, Deci & Sheldon, 2004) is important in the learning process.

Constructivists argued that current teaching method is contradicted with the nature of learning (interactive) and the nature of knowledge (perspective, conventional, tentative, and evolutionary). They argued that teaching goals should be negotiated with students based on their own needs, the programmed activities must emerge from within the context of their world and students should collaborate with their companions in building personally meaningful social construct (Hackbarth, 1996, p.11). Learning must be placed in a universal context, which reflects the real world context, so the constructive process reaches the environment outside the school and the training classroom. (Bednar, et.al, 1995, p103-104).

In short, there are four characteristics of effective instruction which emerged from Constructivist theoretical constructs.

1. Personalization: instruction should relate to students' predisposition to facilitate interest toward learning.
2. Content Structure: content should be structured so it can be most easily grasped by the students.
3. Sequencing: sequencing is an important aspect for presentation of material.
4. Reinforcement: rewards and punishment should be selected and paced appropriately.

Constructivism theory focusing on students' experience can be the best instrument for analyzing students' ability to master English. The teaching method using constructivism theory has the following steps:

1. Encouraging and accepting students' autonomy and initiative.
2. Trying to use raw data and primary sources, in addition to manipulative, interactive, and physical materials.

3. When assigning tasks to the students, use cognitive terminology such as classifying, analyzing, predicting, and creating.
4. Building and using student responses when making "on-the-spot" decisions about teacher behaviors, instructional strategies, activities, and material to be taught.
5. Finding out students' understanding and prior experiences about a concept before teaching the new concept to them.
6. Encouraging communication among students and also between teachers and students.
7. Encouraging student to have critical thinking and inquiry by asking them thoughtful, open-ended questions, and encouraging them to ask questions to each other.
8. Asking the question and finding out the elaboration after students' first response.
9. Placing students in situations that might challenge their previous conceptions and create contradictions that will encourage discussion.
10. Willing to wait a little longer after asking students a question so they have time to think about it thoughtfully.
11. Providing enough time for students to construct their own meaning when learning something new.

The class of experiment is an introduction to literature class. Students enrolled in the Introduction to Literature Class assumed have a limited understanding of the topics that will discuss in the classroom. The meeting usually is in the afternoon class that meets once a week for two hours and forty minutes.

In first-class period, a pre-test, called a "get-to-know-you" questionnaire to ease test anxiety, is administered to all students to identify their knowledge of Literature. Meanwhile, the index cards, Here-by-five-inch are distributed to students for name card. After the pre-test and name cards are collected, the cards are used for an icebreaker game. The name cards are mixed into pairs and handed back to students, but not to the owners of the cards. For example, John would get Josh's card and Josh would get John's card. If possible, students who do not know each other are matched. Students are then asked to take a few minutes to get to know each other and share a funny story, and each student tells the story to the class. This exercise establishes a playful learning atmosphere and a sense of community. Playfulness motivates students, and a sense of community encourages students to articulate their ideas (Fosnot, 1996; Julyan & Duckworth, 1996; Schank, 1997). Motivation and willingness to participate are essential for students to take part in their construction of concept.

Students are then asked to introduce themselves and to share with the class the study about literary work such as novel, drama, short story or poem they have had, either from previous study in Junior or Senior High School. This helps students to know each other as well as providing information on students' existing literary study knowledge that the teachers might not have received in the pretest. Information gathered from the pretest and the students' introductions provides indication how much knowledge students already have to allow them to construct

new understanding about literary work. This is also the first step toward creating a unique community of learning among this particular group of students.

Since most of students have limited knowledge about literature work, the constructivist approach used is providing novels with popular genres. Students are told in the first grade period that the class will use the direct approach to teaching method, and they are expected to explain, explore and discuss what is presented. Students are told that they must take responsibility for their own learning by participating in a class discussion and assignment instructions. Generally, the class starts with 40-minute presentation of the novel category on the discussed concept, then the students will give explanations.

At the end of class, students work in groups to discuss their works. Then the whole class discuss questions with one group leads the discussion. This provides another opportunity for students to discuss the concepts and share what they have learned. In addition, this provides an opportunity for the researcher to ask questions on the interrelationships among concepts and challenge students to examine their overall understanding as had been emphasized by constructivism, presentation with multiple concepts (Perkins, 1992; Spiro et al., 1992).

Students are divided into 4 groups consist of 4 persons. The first assignment is gathering the information of novel categories through various sources. Then, each group has to submit one reports for evaluation and present their findings orally in class. This assignment allows students to put the concept they learn in a real-world context and gather information on the novel genre and its phenomena.

Method

This study is quantitative research and the data collected in the form of numbers rather than words. The data is statistically analyzed while the design of this research is true-experimental. To prove whether the hypothesis is rejected or not, the writer conducted the True-Experimental Research. The data were concerned with the use of memory-test. It was in form of a plain answer sheet, in which the subjects were to write down all the information they had memorized previously from a sources and handout. The memory test was a post-test measuring the effect of independent variable on dependent variable.

The population of this research was the students in the third semester of English Department in State University of Manado, consisting of 4 classes. Every class consists of 48 students so it may calculate the population is 192 students.

In order to get the representative sampling one of the eight classes was chosen randomly and decided to be the sample class. This sample class consisted of 48 students and 40 were randomly chosen as subjects of this research. Group assignment in the topic of novel categories or genre will exhibit first and the information of every group are presented, after that the researcher distributed the questions relate to the topic that have already discussed. They are called as the experimental group and the other group as the control group. The treatment was the group who get the questions list.

Based on the hypothesis, there were two groups in the research. To find out the difference between two groups, the t-test formula was used to test. In order to analyze the data, the following steps are used:

Step 1: Checking the result of post-test in the Experimental Group and the control group.

Step 2: Checking the frequency distribution of the Experimental group and Control group.

Step 3: Calculating the result of the post-test in the Experimental and Control group.

Step 4: Computing tx1-x2 by inserting the appropriate values into the t-test formula.

Step 5: Deciding whether to reject the null hypothesis or not.

RESULTS AND DISCUSSION

In this part statistical formulation used the t-test formula in order to compare the ability of the two groups. Basically, this statistical formula follows the assumption of homogeneity of variance, where:

1. The scores in the two groups are randomly sampled how their respective population and are independent of one another
2. The scores in the respective, population are normally distributed
3. The variances of scores in the populations are equal so the independent variable positively affects the dependent variable. To prove whether the hypothesis was rejected or not, the t-test formula by Shavelson (1981:424) was used

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where:

X_1	=	Mean score of experimental group
X_2	=	Mean score of the control group
n_1	=	Total number of the experimental group
n_2	=	Total number of the control group
S_1^2	=	Calculation of Variance of the experimental group
S_2^2	=	Calculation of Variance of the control group

The following formula ratio is used:

Ho	=	$\mu_1 = \mu_2$
Ho	=	$\mu_1 = \mu_2$
A	=	.05

The criteria for rejecting the null hypothesis are:

(a) Do not reject Ho   if $t_{obs} < t_{crit}$
(b) Reject Ho   if $t_{obs} < t_{crit}$
(This means that the alternative hypothesis is accepted)

The following is the result of post-test in the Experimental group and Control group.

Table 1. The result of the post-test in the Experimental group and Control group

n1	x1	n2	x2
1	6	1	5
2	5	2	4
3	6	3	5
4	4	4	3
5	6	5	5
6	5	6	2
7	5	7	4
8	6	8	5
9	5	9	4
10	6	10	5
11	3	11	0
12	5	12	4
13	6	13	5
14	6	14	4
15	6	15	5
16	5	16	4
17	5	17	4
18	5	18	4
19	5	19	2
20	6	20	3
21	5	21	2
22	6	22	3
23	4	23	3
24	6	24	4
25	6	25	5
26	5	26	4
27	6	27	3
28	5	28	3
29	5	29	5
30	5	30	5
31	3	31	6
32	6	32	6
33	6	33	6
34	6	34	6
35	6	35	2
36	2	36	6

37	4	37	5
38	3	38	6
39	5	39	5
40	4	40	5
$\sum n_1 = 40$	$\sum n_1 = 204$	$\sum n_2 = 40$	$\sum n_2 = 165$

Form the table 1 above it may explain as follow:

1. Total number of the experimental group is $\sum n_1 = 40$
2. The total number of Mean score of experimental group is $\sum n_1 = 204$
3. The total number of the control group is $\sum n_2 = 40$
4. The total number of Mean score of control group $\sum n_2 = 165$

Tabel 2. Frequency Distribution of the Experimental Group (x1)

Score Value (n1)	Tally	f
6		17
5		15
4		4
3		3
2		1

Tabel 3. Frequency Distribution of the Control Group (x2)

Score Value (n2)	Tally	f
6		6
5		12
4		10
3		7
2		4
1		1

Tabel 4. Calculation of the Result of the Post-test in Experimental Group (x1)

n	x1	$\overline{x}_2$	$x_1 - \overline{x}_1$	$(x_1 - \overline{x}_2)^2$
1	6	5.1	.9	.81
2	5	5.1	- .1	-.2
3	6	5.1	.9	.81
4	4	5.1	- 1.1	-2.2
5	6	5.1	.9	.81
6	5	5.1	- .1	.01
7	5	5.1	- .1	.02
8	6	5.1	.9	.81
9	5	5.1	- .1	.02
10	6	5.1	- .9	.81
11	3	5.1	- 2.1	-4.2
12	5	5.1	- .1	-.2
13	6	5.1	.9	.81
14	6	5.1	.9	.81
15	6	5.1	.9	.81
16	5	5.1	- .1	.2
17	5	5.1	- .1	.2
18	5	5.1	- .1	.2
19	5	5.1	- .1	.2
20	6	5.1	.9	.81
21	5	5.1	- .1	-.2
22	6	5.1	.9	.81
23	4	5.1	1.1	-2.2
24	6	5.1	.9	.81
25	6			.9	.81
26	5	5.1	- .1	-.2
27	6	5.1	.9	.81
28	5	5.1	- .1	.2
29	5	5.1	- .1	-.2
30	5	5.1	- .1	-.2

n	x1	$\overline{x}_2$	$x_1 - \overline{x}_1$	$(x_1 - \overline{x}_2)^2$
31	3	5.1	.9	-4.2
32	6	5.1	.9	.81
33	6	5.1	.9	.81
34	6	5.1	.9	.81
35	6	5.1	-3.1	.81
36	2	5.1	-1.1	-6.2
37	4	5.1	-2.1	-2.2
38	3	5.1	-.1	-4.2
39	5	5.1	-1.1	.2
40	4	5.1	-1.1	-2.2
$\Sigma n2 = 40$	$\Sigma n1 = 174$	$\Sigma n1 = 5,1$		$\Sigma n1 = -16.83$

$$x = \frac{\sum X}{n}$$

$$= \frac{204}{40}$$

$$S^2 = \frac{\sum (x_1 - x_2)^2}{}$$

$$= \frac{(204 - 132.65)}{40 - 1}$$

$$= \frac{107.35}{39}$$

$$= 2.752$$

$$= \sqrt{2.752}$$

$$= 1.659$$

The result of the calculation of variance of the experimental group is 1.659.

n	X_2	x_2	$x_2 - x_2$	$(x_2 - x_2)$
1	5	4.125	-1.125	-2.25
2	4	4.125	-.125	-.025
3	5	4.125	.875	.765
4	3	4.125	-.125	-2.25
5	5	4.125	.875	.765
6	2	4.125	-2.215	-4.25
7	4	4.125	-.125	-.025
8	5	4.125	.875	.765
9	4	4.125	-.125	-.25
10	5	4.125	.875	.765
11	0	4.125	0	0
12	4	4.125	-.125	-.25
13	5	4.125	.875	.765
14	4	4.125	-.125	-.25
15	5	4.125	.875	.765
16	4	4.125	-.125	-.25
17	4	4.125	-.125	-.025
18	4	4.125	-.125	-.025
19	2	4.125	-2.125	-4.25
20	3	4.125	-1.125	-2.25
21	2	4.125	-2.125	-4.25

22	3	4.125	-1.125	-2.25
23	3	4.125	-1.125	-2.25
24	4	4.125	-.125	-.25
25	5	4.125	.875	.765
26	4	4.125	-.125	-.25
27	3	4.125	-1.125	-.25
28	3	4.125	-1.125	-2.25
29	5	4.125	.875	62.25
30	5	4.125	.875	.765

31	3	4.125	-.125	-2.25
32	6	4.125	.875	3.51
33	6	4.125	1.875	3.51
34	6	4.125	1.875	3.51
35	6	4.125	1.875	-4.25
36	2	4.125	-2.125	3.51
37	6	4.125	1.875	.765
38	5	4.125	.875	3.51
39	6	4.125	1.875	.765
40	5	4.125	.875	-5.275
$\Sigma n2 = 40$	$\Sigma x2 = 165$	$\sum x\ 2 = 4.125$		$\sum(x\ _2 - x\ 2\ ) = 5.275_2$

Tabel 5. Calculation of the Result of the Post-test in Control Group (x2)

$$x = \frac{\sum X}{n}$$

$$= \frac{165}{40}$$

$$S_1^2 = \frac{\sum(x\ _2\ -\ X_2)^2}{n\ -\ 1}$$

$$= \frac{(165\ -\ 17.015)}{40 - 1}$$

$$= \frac{147.98}{39}$$

$$= 2.794$$

$$_1^2 S = \sqrt{3.794}$$

$$= 1.947$$

The calculation of variance of the control group is 1.947

In this study, the experimental group was expected to score higher than the control group. To test whether there was a significant difference between these two groups, it can be calculated by inserting the values from table 4 and table 5 into the following formula:

$$t_{x-x}(\text{obs.}) =$$

$$= \frac{5.1 - 4.125}{\sqrt{\left[\frac{(40-1)\,2.752 + (40-1)\,3.794}{40 + 40 - 2}\right]\left[\frac{1}{40} + \frac{1}{40}\right]}}$$

$$= \frac{5.1 - 4.125}{\sqrt{\left[\frac{(39)\,2.752 + (39)\,3.794}{78}\right]\left[\frac{2}{40}\right]}}$$

$$= \frac{5.1 - 4.125}{\sqrt{\left[\frac{107.328 + 147.966}{78}\right]\left[\frac{2}{40}\right]}}$$

t x1 -x2 (obs.) = .975

$$\sqrt{\left[\frac{255.294}{78}\right]\left[\frac{2}{40}\right]}$$

$$= \frac{.975}{\left[3\sqrt{275}\right][.05]}$$

$$= \frac{.975}{\sqrt{.163}}$$

$$= \frac{.975}{.404}$$

$$= 2.413$$

From the result of the calculation through t-obs formula above it is found that t-obs is higher that the t-crit (2,413 > 2,000), the null hypothesis is rejected this means that the alternative hypothesis is not rejected or accepted. So it may say that the result of this research is: Applying the Constructivist theory is effective in teaching literature.

Discussion

Refers to the result of the research it may confirm that Constructivism is applied in the classroom by focusing on student questions and interests, building on what students already know, and creating a collaborative environment where students are actively involved in their own learning. Teachers act as facilitators of learning, understanding the preexisting conceptions and understanding of students, and adjusting their teaching to match the learner's level of understanding. Constructivist classrooms rely on shared knowledge between teachers and students, and students are often encouraged to work in groups to share their ideas and knowledge. "With constructivism, there is an emphasis on students interacting with the new ideas and experiences in learning environments fostered by the teacher" (Miller, 2000, p. 37)

There are different types of constructivism that educators can use, such as cognitive constructivism, which focuses on the idea that learning should be related to the learner's stage of cognitive development, and social constructivism, which focuses on the collaborative nature of learning. Constructivist classrooms often have teachers who do small group work, collaborative and interactive activities, and open dialogues about what students need in order to find success. In a constructivist classroom, the focus is on active learning, where students are encouraged to use their critical thinking, deductive reasoning, and analytical abilities to articulate their thoughts and come up with solutions. Students gain knowledge through practical application and their own interpretation of the outcomes, and there are numerous conversations and inquiry-based learning techniques applied to the process.

Furthermore, this study result offering the open opportunity to develop various learning strategy based on the constructivist theory whereas nowadays students characteristics become more complex and challenging so teacher would be helpful to create the innovative classroom for the coming various and complex learning environment

CONCLUSION

Based on the discussion, the following points have been concluded that the scores of the students in the experimental group were in majority higher than those in the Control group. This means that there was a significant difference between the increased interest in learning literature by students who master the topics and phenomena following it. Students are taught by using constructivist theory master the topics better that they are not taught with the theory. The students are more enjoyable in studying every material when used constructivist theory and moreover their interest in studying literary work are significant increased. Thus, it can be said that by applying constructivist theory to learning activities makes positive result because the students actively involved in the classroom further more they can master the material well.

As the completion of this research, the following recommendation have been pointed out. Theoreticians can use this research to support their theory related to this topic. In teaching literature subject, the writer suggests to use the constructivist theory to get the best result and balancing of their knowledge

between theory mastering and application mastering. Constructivist theory provides a sound theoretical foundation for teaching any complex knowledge domain.

REFERENCES

Brooks, J. and Brooks, M. (1993). In Search of Understanding: The Case for Constructivist Classrooms, ASCD

Bednar, A., Cunningham, D. J., Duffy, T., & Perry, D. (1995). Theory in practice: How do we link? In G. Anglin (Ed.), Instructional technology: Past, present, and future (2nd ed., pp. 100–112). Englewood, CO: Libraries Unlimited.

Freman Bruner, J. (1986). The Process of Education. Cambridge, MA: Harvard University Press;

Fosnot, C. T. (1996). Constructivism: A Psychological theory of Learning. In C. T. Fosnot (Ed.) Constructivism: Theory, perspectives, and practice (pp. 8-33). New York: Teacher College Press.

Gagnon, G.W., & Collay, M. (2001). Designing for learning: Six elements in constructivist classrooms. Thousand Oaks, CA: Corwin Press, Inc.

Gillani, B. B. 2003. Learning Theories and the Design of E-learning Environments. Lanham, Md.: University Press of America

Hackbarth, S. (1996). The Educational Technology Handbook. New Jersey: Englewood Cliffs

Howe, K. R., & Berv, J. (2000). Constructing constructivism, epistemological and pedagogical. In

D.C. Phillips (Ed.). Constructivism in education: Opinions and second opinions on controversial issues: 99th yearbook of the National Society for the Study of Education, Part 1. Chicago: University of Chicago Press.

McCarty, L. P., & Schwandt, T. (2000). Seductive illusions: Von Glaserfeld and Gergen on

epistemology and education. In D.C. Phillips (Ed.), Constructivism in education: Opinions and second opinions on controversial issues 99th yearbook of the National Society for the Study of Education, Part 1. Chicago: University of Chicago Press.

Miller, J.B. (2000). The Quest for the constructivist statistics classroom: Viewing Practice through

Constructivist Theory. (1990). Unpublished doctoral Disertation, The Ohio State University, Colombus.

Perkins, D.N. (1992). Smart schools: From training memories to educating minds: New York: The Free Press.

Phillips, D.C. (Ed.). (2000). Constructivism in education: Opinions and second opinions on

controversial issues, 99th yearbook of the National Society for the Study of Education, Part 1. Chicago: University of Chicago Press.

Richardson, V. (1997). "Constructivist Teaching and Teacher Education: Theory and Practice." In

Constructivist Teacher Education: Building a World of New Understandings, ed. V. Richardson, p. 3–14. Bristol, Pa.: Falmer Press.

Schunk, D. H. (2004). Learning theories: An educational perspective. Upper Saddle River, NJ: Pearson Prentice Hall.

Vansteenkiste, M., Simons, J., Lens, W., Deci, E., & Sheldon, K. (2004). Motivating learning, performance, and persistence: The synergistic effects of intrinsic goal contents and autonomy-supportive contexts. Journal of Personality and Social Psychology, 87(2), 246-260.