

Effectiveness Model Application Constructive Teaching Learning (CTL) Interprofesional on Education

Titik Sapartinah^{1*}, Ramelan Sugijana^{2*}

ABSTRACT

Background: The cornerstone philosophy Constructive Teaching Learning (CTL) is constructivism, which emphasizes learning philosophy that learning is not just memorize. Students must construct knowledge in their own minds. That knowledge can not be separated into facts. Fact or a separate proposition, but reflect the skills that can be applied. According to the constructivist view that the acquisition of one's experience of the process of assimilation and accommodation so that a more special experience is the knowledge embedded in the minds according to one's own schemata.

Purpose: The purpose of this study is analyze the effectiveness of CTL model Midwifery Care in Pregnancy (Clinical) to increase student of Midwifery Education Interprofesional MoH Polytechnic Semarang

Methods: Tpestudy is a quasi-experimental design with two groups of intervention and control design. The independent variable in this research is the study variable learning model Constructive Teaching Learning (CTL) and Learning Model Perceiver Mentor (LMPM), while the dependent variable Interprofesional Midwifery students of Polytechnic Education Ministry of Health Semarang. The samples in this study were students Prodi DIII Midwifery Campus Semarang in Semarang as control and students on campus Kendal as the intervention group.

Results: There are differences in effectiveness between the application of the Constructive Teaching Learning (CTL) and the application of Learning Model Perceiver Mentor (LMPM) Midwifery Care in Pregnancy (Clinical) to increase interprofessional education to the students of Department of Midwifery Poltekkes Kemenkes Semarang, where the application of CTL model has a greater influence on interprofessional education improvement compared LMPM models.

Conclusion : Dimension management / conflict resolution as a result of the application of CTL model indicated by the student often consider the perspectives and opinions of others. Student often seek clarification in a respectful way when misunderstandings arise. Student often using the techniques of active listening when others speak. Student often often manage or resolve conflicts with others.

Keywords: Constructive Teaching Learning (CTL), Interprofessional Education (IPE)

¹ *Department of Midwifery, Poltekkes Kemenkes Semarang Indonesia.*

Correspondent Email: titiksapartinah@yahoo.id

² *Department of Nursing, Poltekkes Kemenkes Semarang Indonesia.*

Correspondent Email: sugijanaramelan@gmail.com

I. INTRODUCTION

The correlation between the educational curriculum is the curriculum has a central place in the whole process of education, the relationship between the purpose of the educational content (the relationship between objectives and contents), curriculum directs all forms of educational activities for the achievement of educational goals. Curriculum conception refers to the conception of academic subjects oriented to the development of knowledge from various disciplines. Humanistic curriculum is an orientation of the development of personality, attitudes, emotions / feelings. Social reconstruction curriculum oriented towards the development of the ability to solve problems-problems in society, while the technological curriculum oriented towards the development of behavior / competence in various fields of life (Havyer RD,2016)

The cornerstone of curriculum development is philosophical, psychological, sociological, Science and Technology (Science and Technology). Fisolofis curriculum development platform is able to determine the direction of educational philosophy will carry children through education in schools. The curriculum is essentially a tool to achieve educational goals, the curriculum was developed with the philosophy adopted nation. The cornerstone of psychological curriculum development is to know about psychology or learning theory evolve a provision for teachers in their main tasks is membelajarkan children. Sociological grounding the process of socialization through interaction towards cultured human insane. Exposing seven social education functions : teaching skills, transmit culture, encourage environmental adaptation, establish discipline (Review, 2017)

The general principle is the principle of relevance of curriculum development, the principle of flexibility, continuity principle and the principle of efficiency. There is also a special principles of curriculum development is the principle of determining the purpose of education, educational content selection, selection of teaching and learning process, the selection of media and teaching tools, and assessment. Curriculum change is something necessary because the curriculum is a product of the period concerned. Curriculum changes past often are simultaneously even overlapping with the curriculum changes that occur today. Curriculum change will happen and be successful if there is a change in people or society. Curriculum development is a teamwork activity. Curriculum development is basically the process of determining the choice of alternatives (Mahler C, 2019)

Interprofessional Education are two or more professions learn with, from and about each other to improve collaboration and quality of service. IPE is an approach to the educational process two or more different disciplines collaborate in the teaching-learning process with the aim of fostering interdisciplinary / interprofessional interactions that enhance the practice of their respective disciplines. According to the Cochrane Collaboration, IPE occurs when two or more students of different health professions implement interactive learning with the aim of improving interprofessional collaboration and improve the health or well-being of patients (Rn JW, 2011)

CTL is the foundation philosophy of constructivism, namely learning philosophy that emphasizes that learning is not just memorize. Students must construct knowledge in their own minds. That knowledge can not be separated into facts. Fact or a separate proposition, but reflect the skills that can be applied. According to the constructivist view that the acquisition of one's experience of the process of assimilation and accommodation so that a more special experience is the knowledge embedded in the minds according to one's own schemata

II. METHODOLOGY

The design of the study is a quasi-experimental design with two groups of intervention and control design. The effectiveness of the intervention will be assessed by comparing the intervention group and a control group of students in Midwifery Care in Pregnancy (Clinical).

The population in this study were all students of the third semester of Midwifery Poltekkes Kemenkes Semarang.

The sample in this study is the total population of all students of Midwifery Poltekkes Kemenkes Semarang third semester, where classes Kendal as the intervention group number 55, and the class of Semarang as a control group to 55 people.

III. RESULTS AND DISCUSSION

Univariate analysis presented in the form of the mean, minimum, maximum, and standard deviation, and frequency distribution of the results of the variable interprofessional education in midwifery care of pregnant women and dimensions, as follows

Table 1. The value Mean, Minimum, Maximum, and Standard Deviation Research variable

No.	Variables and Dimensions	Model Constructive Teaching Learning (CTL)				Mentor perceiver Learning Model (LMPM)			
		mean	Minimum	maximum	standard Deviation	mean	Minimum	maximum	standard Deviation
1	variables interpersonal Education	77.51	54.84	95.97	7.68	63.25	43.55	84.68	10.52
	Dimension								
a.	Communication	78.90	50.00	100.00	9.87	63.77	46.43	85.71	9.23
b.	Collaboration	78.30	50.00	100.00	10.82	68.78	43.75	100.00	16.23
c.	Roles and Responsibilities	77.99	64.29	100.00	7.10	68.90	32.14	100.00	17.25
d.	Collaborative Approach Patient / Family	77.27	50.00	100.00	10.51	58.52	31.25	87.50	11.43
e.	team functions	76.36	50.00	100.00	10.34	58.00	35.00	80.00	11.25
f.	Management / Conflict Resolution	75.11	43.75	100.00	12.41	58.30	31.25	87.50	12.21

Interprofessional education in midwifery care of pregnant women is an achievement of student learning in clinical learning which include communication, collaboration, roles and responsibilities, collaborative approach to patient / family, team functions, and management / conflict resolution when providing midwifery care to pregnant women.

Results showed results interprofessional education the group that apply Constructive models Teaching Learning (CTL) midwifery care in pregnancy (Clinical) by students of Department of Midwifery Poltekkes Kemenkes Semarang obtained an average value of 77.51% which is included in both categories were among 62.50% -81.24% 54.84% with the lowest values were classified as less and the highest 95.97% were classified as very good. While interprofessional education group applying a learning model perceiver mentor (LMPM) midwifery care in pregnancy (Clinical) by students of Department of Midwifery Polytechnic of Semarang MoH obtained an average value of 63.25%, which is also included in both categories were among 62.50% - 81.24% to 43.55% the lowest values were classified as less and the highest 84.68% were classified as very good.

The results based on the dimensions interprofessional education is known to the dimension of communication: the ability to communicate effectively in a respectful manner and responsive to others (including team members, patients / clients and healthcare providers outside the team) showed that communication skills group implementing CTL model of midwifery care in pregnancy (Clinical) by students of Department of Midwifery Poltekkes Kemenkes Semarang obtained an average value of 78.90% which is included in both categories were among 62.50% -81.24% 50.00% with the lowest value and the highest classified as less than 100%, which is in excellent condition. While dimension of communication in the group that apply the model LMPM midwifery care in pregnancy (Clinical) by students of Department of Midwifery Poltekkes Kemenkes Semarang obtained an average value of 63.77%, which is also included in both categories were among 62.50% - 81.24% to 46.43% the lowest values were classified as less and the highest 85.71% were classified as very good.

Dimensions collaboration is capacity of to build / maintain collaborative working relationships with other providers, patients / clients and families. The result of the collaboration dimension shows that that the collaboration capabilities polytechnic students of Department of Poltekkes Kemenkes Semarang group implementing CTL model of midwifery care in pregnancy (Clinical) obtained an average value of 78.30% which is included in both categories were among 62.50% -81.24% 50.00% with the lowest value and the highest classified as less than 100%, which is in excellent condition. While collaboration capabilities Midwifery students of Poltekkes Kemenkes Semarang group implementing LMPM model of midwifery care in pregnancy (Clinical) obtained an average value of 68.78% which is included in both categories were among 62.50% -81.24% 43.75% with the lowest value and the highest classified as less than 100%, which is in excellent condition.

Dimensions of roles and responsibilities is capacity of clarifying roles and responsibilities of a person associated with the care of patients / clients and families (eg, scope of practice, legal and ethical responsibility); and to demonstrate an understanding of the roles, responsibilities, and relationships of others in the team. Results of research on the dimensions roles and responsibilities show that that the role and responsibilities of the Department of Midwifery Poltekkes Kemenkes Semarang group implementing CTL model of midwifery care in pregnancy (Clinical) obtained an average value of 77.99% which is included in both categories were among 62.50% -81.24% 64.29% with the lowest values were quite good and the highest 100% were classified as very good. While roles and responsibilities of the Department of Midwifery Poltekkes Kemenkes Semarang group implementing LMPM model of midwifery care in pregnancy (Clinical) obtained an average value of 68.90% which is included in both categories

were among 62.50% -81.24% 32.14% with the lowest values were classified as very less and the highest 100% were classified as very good.

Dimension collaborative approach to patient / family-clients is the ability to apply the principles centered on patient / client through collaboration antarprofesional. Results of research on the dimensions of the collaborative approach the patient / family-client indicates thatthat ability collaborative approach to patient / family-client midwifery student of Poltekkes Kemenkes Semarang group implementing CTL model of midwifery care in pregnancy (Clinical) obtained an average value of 77.99% which is included in both categories were among 62.50% -81.24% 50.00% with the lowest value and the highest classified as less than 100%, which is in excellent condition. while the dimensionsability collaborative approach to patient / family-client Midwifery student of Poltekkes Kemenkes Semarang group implementing LMPM model of midwifery care in pregnancy (Clinical) obtained an average score of 58.52%, which is included in the category of less were among 43.75% -62.49% 31.25% with the lowest values were classified as very less and the highest 87.50% were classified as very good.

Dimensions team function an ability to contribute to effective team functioning to improve collaboration and quality of care. Indications of this dimension is to identify and contribute to the functioning and effective team dynamics, leadership team recognizes that health services can be alternated or shared depending on the situation, and contribute to the discussion interprofesional team. The results of the study show that the dimensions of team functionthat team function Midwifery student of Poltekkes Kemenkes Semarang group implementing CTL model of midwifery care in pregnancy (Clinical) obtained an average value of 76.36% which is included in both categories were among 62.50% -81.24% 50.00% with the lowest value and the highest classified as less than 100%, which is in excellent condition. While the dimensions of team functionMidwifery student of Poltekkes Kemenkes Semarang group implementing LMPM model of midwifery care in pregnancy (Clinical) obtained an average score of 58.00%, which is included in the category of less were among 43.75% -62.49% 35.00% with the lowest values were classified as very less and the highest 80.00%, which is quite good.

Management dimension resolution / conflict the ability to manage and resolve conflicts between and with providers, patients / clients and other family effectively. Results of research on the dimensions management resolution / conflict show that that the management of resolution / conflict Midwifery students of Poltekkes Kemenkes Semarang group implementing CTL model of midwifery care in pregnancy (Clinical) obtained an average value of 75.11% which is included in both categories were among 62.50% -81.24% 43.75% with the lowest value and the highest classified as less than 100%, which is in excellent condition. while the dimensionsmanagement resolution / conflict Midwifery students of Poltekkes Kemenkes Semarang group implementing LMPM model of midwifery care in pregnancy (Clinical) obtained an average score of 58.30%, which is included in the category of less were among 43.75% -62.49% 31.25% with the lowest values were classified as very less and the highest 87.50% were classified as very good.

Before conducting the test bivariate analysis with a difference interpersonal Educationbetween groups Model Constructive Teaching Learning (CTL) dab Learning Model Perceiver Mentor (LMPM), first tested for normality with the Kolmogorov-Smirnov test. If the data are normally distributed, then the test will be conducted at test but if

the data distribution is not normal then using a bivariate test Mann Whitney Test. Normality test results the variables are as follows

Table 2. Normality Test Research Variables

Research Variables and Dimensions	<i>Kolmogorov Smirnov</i>	p	$\alpha = 0.05$	Conclusion	Test used
variables <i>interpersonal Education</i>	0.075	0.163	$p > 0.05$	Normal	t test
Dimension					
a. Communication	0,118	0,001	$p < 0.05$	Abnormal	Mann Whitney test
b. Collaboration	0.177	0,000	$p < 0.05$	Abnormal	Mann Whitney test
c. Roles and Responsibilities	.290	0,000	$p < 0.05$	Abnormal	Mann Whitney test
d. Collaborative Approach Patient / Family	0.134	0,000	$p < 0.05$	Abnormal	Mann Whitney test
e. team functions	.128	0,000	$p < 0.05$	Abnormal	Mann Whitney test
f. Management / Conflict Resolution	.120	0,000	$p < 0.05$	Abnormal	Mann Whitney test

Normality test results showed that all of the research data distribution is not normal unless the variable interprofesional education, Therefore, testing the hypothesis is used in the variable t test interpersonal education and Mann Whitney test to perform different tests on the dimensions, The results of the research hypothesis testing are summarized in the following table:

Table 3. Research Hypothesis Testing

Variables and Dimensions	Hypothesis testing				Mean (%)		Conclusion
	t test	Mann Whitney test (Z)	p	$\alpha = 0.05$	CTL	LMP M	
variables <i>interpersonal Education</i>	8.116	-	0,000	$p < 0.05$	77.51	63.25	There was a significant difference
Dimension							
a. Communication	-	-6.499	0,000	$p < 0.05$	78.90	63.77	There was a significant difference
b. Collaboration	-	-3.316	0,001	$p < 0.05$	78.30	68.75	There was a significant difference
c. Roles and Responsibilities	-	-2.030	0,042	$p < 0.05$	77.99	68.90	There was a significant difference
d. Collaborative Approach Patient / Family	-	-7.021	0,000	$p < 0.05$	77.27	58.52	There was a significant difference
e. team functions	-	-7.139	0,000	$p < 0.05$	76.36	58.00	There was a significant difference
f. Management / Conflict Resolution	-	-6.042	0,000	$p < 0.05$	75.11	58.30	There was a significant difference

Explanation of the research hypothesis testing results are as follows:

a. interpersonal Education

Test results the difference in effectiveness between the application of the Constructive Teaching Learning (CTL) and the application of the perceiver Mentor Learning model (LMPM) Midwifery Care in Pregnancy (Clinical) to increase interprofessional student of Midwifery Education at the Ministry of Health Polytechnic of Semarang obtained t value of 8.116 with $p = 0.000$ to $p < 0.05$, which means there is a significant difference interprofessional education in the application of the CTL and LMPM Midwifery Care in Pregnancy (Clinical), with the value of interprofessional education on CTL model group by 77.51% higher than in the group amounted to 63.25% LMPM models.

b. Dimensions of Communication

Test results the difference in effectiveness between the application of the Constructive Teaching Learning (CTL) and the application of the perceiver Mentor Learning model (LMPM) Midwifery Care in Pregnancy (Clinical) to increase the dimensions of communication in students polytechnic MoH Department of Midwifery Semarang Mann Whitney earned value (Z) of -6.499 with $p = 0.000$ to $p < 0.05$, which means there is a significant difference dimensional model of communication on the application of CTL and LMPM Midwifery Care in Pregnancy (Clinical), the communication dimension values in the model group CTL by 78.90% higher than in the group amounted to 63.77% LMPM models.

c. dimensions of Collaboration

Test results the difference in effectiveness between the application of the Constructive Teaching Learning (CTL) and the application of the perceiver Mentor Learning model (LMPM) Midwifery Care in Pregnancy (Clinical) to increase collaboration on the dimension of polytechnic students of Department of Midwifery MoH Semarang Mann Whitney earned value (Z) of -3.316 with $p = 0.001$ to $p < 0.05$, which means there is a significant difference dimensional model of collaboration in the implementation of CTL and LMPM Midwifery Care in Pregnancy (Clinical), with the collaboration dimension values in CTL model group by 78.30% higher than in the group amounted to 68.75% LMPM models.

d. Dimensions Roles and Responsibilities

Test results the difference in effectiveness between the application of the Constructive Teaching Learning (CTL) and the application of the perceiver Mentor Learning model (LMPM) Midwifery Care in Pregnancy (Clinical) to increase in dimension roles and responsibilities the students of Department of Midwifery Polytechnic of Semarang MoH Mann Whitney earned value (Z) of -2.030 with $p = 0.042$ so that $p < 0.05$, which means there is a significant difference dimension roles and responsibilities on the application of LMPM models of CTL and Midwifery Care in Pregnancy (Clinical), with the value of the dimension roles and responsibilities Reviewed by CTL model groups 77.99% higher than in the group amounted to 68.90% LMPM models.

e. Dimensional Approach Collaborative Patient / Family

Test results the difference in effectiveness between the application of the Constructive Teaching Learning (CTL) and the application of the perceiver Mentor Learning model (LMPM) Midwifery Care in Pregnancy (Clinical) to the increase in dimension collaborative approach to patient / family the students of Department of Midwifery Polytechnic of Semarang MoH Mann Whitney earned value (Z) of -7.021 with $p = 0.000$ to $p < 0.05$, which means there is a significant difference dimension collaborative approach to patient / family on the application of LMPM models of CTL and Midwifery Care in Pregnancy (Clinical), with the value of the dimension collaborative approach to patient / family Reviewed by CTL model groups 77.27% higher than in the group amounted to 58.52% LMPM models.

f. Dimensions Function Team

Test results the difference in effectiveness between the application of the Constructive Teaching Learning (CTL) and the application of the perceiver Mentor Learning model (LMPM) Midwifery Care in Pregnancy (Clinical) to the increase in dimension team function the students of Department of Midwifery Poltekkes Kemenkes Semarang Mann Whitney earned value (Z) of -7.139 with $p = 0.000$ to $p < 0.05$, which means there is a significant difference dimension team function on the application of LMPM models of CTL and Midwifery Care in Pregnancy (Clinical), with the value of the dimension team function Reviewed by CTL model groups 76.36% higher than in the group amounted to 58.00% LMPM models.

g. Dimension Management / Conflict Resolution

Test results the difference in effectiveness between the application of the Constructive Teaching Learning (CTL) and the application of the perceiver Mentor Learning model (LMPM) Midwifery Care in Pregnancy (Clinical) to the increase in dimension management / conflict resolution the students of Department of Midwifery Poltekkes Kemenkes Semarang Mann Whitney earned value (Z) of -6.042 with $p = 0.000$ to $p < 0.05$, which means there is a significant difference dimension management / conflict resolution on the application of LMPM models of CTL and Midwifery Care in Pregnancy (Clinical), with the value of the dimension management / conflict resolution Reviewed by CTL model groups 75.11% higher than in the group amounted to 58.30% LMPM models.

IV. DISCUSSION

The results showed that there the difference in effectiveness between the application of the Constructive Teaching Learning (CTL) and the application of Learning model perceiver Mentor (LMPM) Midwifery Care in Pregnancy (Clinical) to increase interprofessional Education to students of Department of Midwifery polytechnic MoH Semarang, where the application of CTL model managed to improve interprofessional Education students more higher than in the application of the LMPM ($t = 8.116$ and $p < 0.05$)

CTL is the foundation philosophy of constructivism, namely learning philosophy that emphasizes that learning is not just memorize. Students must construct knowledge in their own minds. That knowledge can not be separated

into facts. Fact or a separate proposition, but reflect the skills that can be applied. CTL is a concept of learning that helps teachers teach the link between the material to real world situations students and encourage students to make connections between the knowledge possessed by its application in the lives of students as members and the community. The constructivist learning builds upon the experience or knowledge that has gone before.

Without experience, one can not constitute knowledge. Experience is not just a physical experience, but also the cognitive and mental experience. Knowledge of the structure formed by the acceptance of the concept of a person when it interacts with its environment. So for people, the environment is all objects and propositions that have been abstracted into the experience of it.

For constructivism, learning is not knowledge transfer activities (transfer of knowledge) of lecturers to students, but activities that allow students to build their own knowledge (self study). Means the participation of instructional faculty with students in the form of knowledge, create meaning, looking for clarity, is critical, and held a justification. Learning is a process of helping someone to think the right way, by the way let him think for themselves. Good thinking is more important than having the right answer to a problem. A person who has a good way of thinking that can use this way of thinking in facing a new phenomenon and can find a solution in the face of other issues.

The results showed no significant difference dimensional model of communication on the application of CTL and LMPM Midwifery Care in Pregnancy (Clinical) with dimensions of communication in the group CTL model by 78.90% higher than in the group amounted to 63.77% LMPM models (Mann Whitney $Z = -6.499$ and $p < 0.05$). Communication students increased as a result of the application of CTL model is indicated by intensity communicate with others in a way that is confident, assertive and respectful that more often. Students are able to communicate opinions and views about the care of patients associated with other people. Students often respond or reply to requests in a timely manner. Students often use the strategy of communication (verbal and non-verbal) appropriately. Students often use in a logical and structured communication. Students can be explained in terms of a specific discipline. Students often use appropriate strategies to communicate with individuals with disabilities.

The results showed no significant difference dimensional model of collaboration in the implementation of CTL and LMPM Midwifery Care in Pregnancy (Clinical), with the collaboration dimension values in CTL model group by 78.30% higher than in the group amounted to 68.75% LMPM models (Mann Whitney $Z = -3.316$ and $p < 0.05$). Dimensions collaboration of students increased as a result of the application of CTL model indicated by the student often establish collaborative relationships with other people. Student often integrate information from others in planning and providing care patient / client. Student often share information with other providers. And student often ask the consent of the patient / client or designated decision maker when information is shared.

The results showed no significant difference dimension roles and responsibilities on the application of LMPM models of CTL and Midwifery Care in Pregnancy (Clinical), with the value of the dimension roles and responsibilities Reviewed by CTL model groups 77.99% higher than in the group amounted to 68.90% LMPM models (Mann Whitney $Z = -2.030$ and $p < 0.05$). Dimension roles and responsibilities as a result of the application of CTL model indicated by the student often describe the roles and responsibilities of its own with a team / patient /

family. Student often included in the roles and responsibilities of other providers in the delivery of patient care. Student often shows professional assessment while performing duties or delegating tasks. Student often accept responsibility for the failure of collaborative goal. Student often accept responsibility for the actions of individuals who have an impact on the team. Student often explain the scope of its own practices, codes, standards, and / or clinical guidelines related to the collaborative relationship centered on the patient. Student often share specific disciplinary knowledge or evidence based best practices with others.

The results showed no significant difference dimension collaborative approach to patient / family on the application of LMPM models of CTL and Midwifery Care in Pregnancy (Clinical), with the value of the dimension collaborative approach to patient / family Reviewed by CTL model groups 77.27% higher than in the group amounted to 58.52% LMPM models (Mann Whitney Z = -7.021 and p <0.05). Dimension collaborative approach to patient / family as a result of the application of CTL model indicated by the student often seek input from patient / client and family. Student often integrating circumstances, beliefs, and values the patient / client and family into the treatment plan. Student often share options and health care information with patients / clients and families. Student often encourage patients / clients and families as partners in the decision making process.

The results showed no significant difference dimension team function on the application of LMPM models of CTL and Midwifery Care in Pregnancy (Clinical), with the value of the dimension team function Reviewed by CTL model groups 76.36% higher than in the group amounted to 58.00% LMPM models (Mann Whitney Z = -7.139 and p <0.05). Dimension team function as a result of the application of CTL model indicated by the student's ering to identify the relationship between the team function and quality of care. Student often identify strategies that will improve the functioning of the team. Student often realize the importance of changing or share leadership with others. Student often see themselves as part of a team. Student often often contribute to team discussions interprofesional.

The results showed no significant difference dimension management / conflict resolution on the application of LMPM models of CTL and Midwifery Care in Pregnancy (Clinical), with the value of the dimension management / conflict resolution Reviewed by CTL model groups 75.11% higher than in the group amounted to 58.30% LMPM models (Mann Whitney Z = -6.042 and p <0.05). Dimension management / conflict resolution as a result of the application of CTL model indicated by the student often consider the perspectives and opinions of others. Student often seek clarification in a respectful way when misunderstandings arise. Student often using the techniques of active listening when others speak. Student often often manage or resolve conflicts with others.

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