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## **IN-SERVICE TEACHERS' THEORETICAL ORIENTATIONS AND CLASSROOM PRACTICES: ANALYSIS OF ESPOUSED BELIEFS AND PERCEIVED PRACTICES**

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### **Abstract**

**Purpose:** The purpose of this study was to identify the theoretical orientations that influence teaching practices, and the relationships between beliefs and practices of in-service teacher trainees drawn from different parts of Ethiopia who were attending summer training program in different academic departments of the Addis Ababa University.

**Methodology:** Participants of summer in-service program (N=276) were randomly selected from four subject areas and made to complete a self-report questionnaire designed for this purpose. The questionnaire had 40 Likert Scale type items rated over 5 points so as to collect data on beliefs and practices relating to planning, teaching and assessment behaviors of the surveyed teachers.

**Findings:** The Findings indicated that in most of the cases the beliefs and practices of the surveyed teachers aligned with constructivist reform which the Ethiopian Ministry of Education expects all teachers to implement. Congruence between espoused beliefs and perceived practices were noted with evidence of low relationship between the two. The findings have contributions to raising teachers' tacit knowledge of teaching craft. Insights for educational administrators and areas of focus for future research were also identified.

**Key words:** Beliefs, practices, behaviorist, constructivism, In-service teachers

## 1.0 INTRODUCTION

Since 1994, Ethiopia adopted new Education and Training Policy that paved way for solving problems of the education system through design of new curriculum, decentralization of educational management as well as reform in teacher education programs (TGE, 1994). Based on this policy, the Ministry of Education intends teacher education programs at all levels to adopt constructivism as an approach which emphasizes greater learner participation in the teaching learning processes. This is hoped to help teachers give up the behaviorist, traditional, teacher-centered approach and gradually transform to the modern, learner-centered practices in their classroom teaching and assessment.

Behaviorist teachers often tend to treat all students in the same way by putting them at receptive end where the teacher follows the transmission model. Teachers plan and implement structured lessons hoping that a single size fits all. Such a belief fails to recognize the effect of individual differences on students' learning. Behaviorism also expects students to learn by producing correct responses to environmental stimuli while maintaining discipline and order for effective learning to occur. Learning is assessed based on the responses provided by each individual learner against that of other students in the classroom (Erkmen, 2014). Assessment focuses on evaluating how much a student has learnt than how well learning occurred. Such a practice has little contribution for diagnosis of strengths and weaknesses that might inform the type of action to be taken for further learning and teaching (Powers, Zippay and Cassie, 2006). Behaviorists' focus is on learning as affected by changes in behavior of the learner that can be observed and measured. They conclude that given the right environmental influences, all learners acquire identical understanding and that they can learn alike.

On the other hand, constructivism emphasizes learners' freedom of making explorations, active participation and the social nature of learning that allows interdependence among students than relying on the teacher as sole source of information (Hassad, 2011). Freedom to engage in learning at one's own pace allows the construction of different meaning (De Lisi, 1979) about the same concept by individuals. Constructivist teachers deny the belief that students are receptacles of information, and thus, treat them as creators of knowledge through their own personal engagement in learning tasks, thinking, reasoning and reflection (Cox, 2011). This theory maintains that individuals create or construct their own new understandings or knowledge through exploring what they already know and believe as well as the ideas, events, and activities with which they come in contact (Richardson, 1997).

Constructivist theories guiding teachers' beliefs and practices call for direct exploration of own activities, personal reflection on previous practices and development of self awareness that help adapt to learner-centered teaching and assessment practices. Constructivist assessment helps boost student achievement (De Lisi 1979; Maheshwari, 2017) by emphasizing individual's reasoning abilities that lead to learning how to learn (CERI, 2008) as opposed to drawing out memorized concepts already accumulated in the mind of the learner.

Beyond adherence to either of these theories, teacher practices are often influenced by the beliefs teachers hold about teaching and learning. Much of these beliefs are formed from early life experiences as students, while some others are acquired through formal teacher training

programs. Researchers such as Richards, Gallo & Ranandya (n.d.) report that teacher beliefs and practices, whether behaviorist or constructivist oriented, tend to be relatively permanent for they are influenced by previous experiences of teachers as young students themselves. During their student life, the current teachers had the opportunity to observe their own teachers' practices which had considerably shaped much of their personal beliefs as to what good teaching is all about. In addition, school context including such features as the organization of the school, the structure of the classroom, the teacher's qualifications, the timetable utilized, and the assessment method applied also affect curriculum design and teaching approaches (Venville et al. 2008).

The current study, therefore, investigated the planning, teaching and assessment beliefs and practices of in-service teacher trainees admitted to the summer program at Addis Ababa University. Participants were drawn from four different fields of study having background of teaching experiences in primary and secondary schools throughout Ethiopia. These teachers were attending the summer program to upgrade their qualification levels through long summer in-service training which lasts from the beginning of July to the first week of September. The study set out to answer the following research questions.

### ***Research Questions***

1. How do the in-service teachers perceive their beliefs and practices relating to planning, teaching and assessment in their subject areas?
2. With which theory of learning do the practices of these teachers align?
3. Is there significant relationship between the beliefs and practices of teachers as measured by scores on planning, teaching, and assessment variables?

## **2.0 LITERATURE REVIEW**

There is the most commonly held assumption that teachers' beliefs usually guide their classroom practices whether or not these beliefs are explicit or implicit (Khader, 2012; Pajares, 1992; Williams, M., & Burden, R. L. 1997; Cantu, 2001; Brown & Webb, 1968). According to Pajares (1992) planning and teaching practices of teachers are most influenced by their beliefs than the knowledge they possess. Similarly, Richards, Gallo and Randaya (n.d) conclude that changes in teacher beliefs lead to changes in classroom practices showing the prevalence of a linear relationship between the two. Once strongly held and adhered to, teacher beliefs remain permanent and changing them becomes difficult (Kane, 2002) mainly due to resistance on the part of teachers (Meirink, et al, 2009). Farrell and Jessica (2015) study on one reading teacher discovered evidence of relationship to some extent between held beliefs and classroom practices. In addition, their research also correlated with previous findings which examined relationship between beliefs and practices. Kaymakamoglu (2017) witness that beyond guiding teachers' decisions and actions, beliefs are said to bear positive influence on students' academic performances. Good and Brophy (2003) claim that teacher's expectations about the academic abilities of students would undoubtedly shape their curricular planning, teaching and assessment decisions. Despite this general assumption, research on teacher beliefs and practices has never been consistent. While some agree with such assumption, others tended to contradict. Researches on specific subject matter teaching, for example, sometimes pronounce the mismatch

between teachers' beliefs and classroom practices. A study by Briton (2003) on the effects of middle school teacher beliefs on classroom practices, for example, found that there was discrepancy between verbal expressions of what teachers believe and their observed classroom practices. Hos and kekec (2014) investigated the mismatch between non-native English as a Foreign Language Teachers' Grammar Beliefs and Classroom Practices. The findings suggest teachers who appreciate the importance of Communicative Language Teaching failed to use such method in their classrooms. Khader (2012), found no statistically significant relationship between the teachers' pedagogical beliefs and their actual classroom practices. Erkmen (2014) found that novice teachers were influenced by students' expectations to demonstrate classroom practices which were divorced from their initially held philosophies about teaching and learning. Devine, Fahie and McGillicuddy (2013) noted the presence of contradictions between teacher beliefs and observed practices where the latter were influenced by contextual factors. Similarly, Anderson and Hot-Reynolds advance the view that a belief removed from its context dose not have inherent character or value (Anderson and Hot-Reynolds, n.d.). Margret Cain (2012) study noted variations in the extent to which teacher trainees' beliefs influenced their classroom practices. Teachers' belief system is said to guide their classroom practices (Evrin, Gokce & Ensa, 2009; Hos & Kekec, 2014, Davis & Wilson, 1999). Knowledge about teachers' beliefs also boosts teachers' self-awareness and thereby enhances their capacity to continuously monitor how much related their practices are to their beliefs. Moreover, teacher beliefs exert much influence over their planning activities and considered one of the predictors of their classroom behaviors (Pajares, 1992.; Williams, et. al 1997). On the other hand, beliefs at times tend to change themselves as a result of practice. Mohammed (2013), for example, made a follow up on a science teacher's practice for a period of two years and his findings witnessed the evidence of practice changing classroom practices.

While controversy over beliefs and practices of teachers may continue unresolved, some other researchers take a middle position that the beliefs and practices will coexist interactively in cyclic relationship (Verjovsky & Waldegg, 2005) such that separating one from the other becomes impossible. A general conclusion would be that beliefs and practices relationships are not affected by a single common variable, but rather a result of unforeseen multiple issues including environmental contextual factors, students' performances and teacher's motivational factors, etc.

### **3.0 METHOD**

A cross-sectional descriptive survey design was employed with the total population of 1124 summer in-service training program participants of the Addis Ababa University during 8 weeks long summer session of 2018. A sample of in-service teachers (N=276) was drawn from Language, Social Science, Natural Science and Mathematics subject areas.. The participants were studying towards Bachelor of Arts/Science as well as Master of Arts/Science Degrees in teaching school subjects. 183 of them were diploma holders and 93 Bachelor's degree holders upgrading their qualifications to Bachelor's and Master's degrees respectively. The participants were randomly selected from among those who attended summer in-service programs during 2018 summer session, and made to respond to a 40 items questionnaire rated over 5 point Likert

type scale. The questionnaire had two sub-scales, namely Belief sub-scale containing 19 items, and practice sub-scale containing 21 items. The items in the two sub-scales were categorized into three dimensions: Planning, Teaching and Assessment. They were also positively and negatively stated and the negative items were reverse coded while entering data into the SPSS software.. Low results on each item represented the behaviorist orientation while high results showed constructivist orientations of teachers' beliefs and/or practices.

The collected data were analyzed quantitatively using SPSS Version 20 software, organized and displayed in the form of tables. Mean, independent sample t-tests, One-way Analysis of Variance (ANOVA), and paired sample t-test were the statistical tools used for analysis. The null hypothesis was rejected at the .05 level of significance. Frequency counts and percentages were employed to analyze the respondents' levels of agreement or disagreement with belief and practice statements. Mean scores on beliefs about, and practices of planning, teaching and assessment were compared against several independent variables such as sex, level of education, and major fields of study. P values were calculated to determine as to whether or not significance of differences existed between the mean scores of various groups.

To interpret the results mean scores and percentage points were arbitrarily classified as follows:

Mean Score	Percentage point (%)	Meaning
<b>1.0 – 2.99</b>	1.00 – 49.99	Traditional/teacher-centered/ Behaviorist orientation
<b>3.00</b>	50.00	Neutral/ collaborative/Eclectic orientation
<b>3.01-5.00</b>	50.01 – 100	Modern/Learner-centered/Constructivist orientation

**Figure 1: Interpretations of Mean Scores and/or percentages**

Mean score of 3.00 (expected mean) or percentage point of 50.00% is accepted as showing neutral/eclectic position that combines both behaviorist and constructivist orientation. Slight rises above 3.01 mean score or percentage point of 50.01% indicates learner-centered, constructivist oriented belief or practice. Contrary to this, a mean value with slight decline below 2.99 or 49.99% percentage point would indicate teacher-centered, behaviorist oriented belief or practice adopted by the respondents. The data thus analyzed were presented in the form of tables which were then interpreted using narrative accounts.

#### 4.0 DATA ANALYSIS

The items in Table I below measure planning beliefs of teachers. Close to half of the respondents, that is, 130 (47.1%) disagree with the statement that *teachers should decide as to what content and activities to be selected* rather than involving students. For these teachers, the work of planning must be shared among students and teachers in a participatory manner. A third of the teachers, that means, 98 (35.5%) believe that such planning is the sole responsibility of teachers. It can be concluded that most of the teachers advance the belief that students need to be made part of the planning process rather than the teacher plans everything on his/her own.

**Table 1: In-service Teachers' Planning Beliefs**

Belief statements		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
While preparing lessons, teachers need to think of correct ways of solving problems	N %	131 (47.5%)	65 (23.6%)	10 (3.6%)	25 (9.1%)	45 (16.3%)
Teacher decides activities to be done than the student decides	N %	41 (14.9%)	89 (32.2%)	48 (17.4%)	69 (25.0%)	29 (10.5)
Instruction should be built around problems with correct answers and ideas that most students can grasp	N %	95 (34.4%)	94 (34.1%)	26 (9.4%)	44 (15.9%)	17 (6.2%)
Effective learning requires quite classroom	N %	114 (41.3%)	74 (26.8%)	30 (10.9%)	50 (18.1%)	8 (2.9%)

Although over 64% of the teachers hold the view that instruction should be built around problems, they deny the fact that problems must be solved correctly by all students on equal footing. It can therefore, be concluded that the surveyed teachers believe in the importance of varying activities for individual students according to their abilities and understanding levels. One can also infer that while setting problems for students during planning is the responsibility of teachers, expecting correct answers for those problems is not important because of individual differences that prevail among students. For nearly two-thirds of the teachers, each student is assumed to be unique, who at the same time is viewed as being free to come up with different solutions to the same problem.

Planning for classroom instruction involves taking proactive measures and preparation for classroom behavior management. Teachers are different in their classroom management approaches. Some are highly controlling while others give freedom to their students. Still others take middle ground where they combine control and freedom as it deems necessary. Just to know the position they hold about planning for student behavior, the teachers were requested to rate their level of agreement or disagreement to the statement “*Effective learning requires quite*

*classroom*” In their responses, 68.1% indicated avoidance to planning for quite classroom atmosphere; while 21% showed agreement to the statement, implying that many of the in-service teachers support interactive behaviors among students while learning their subject matter contents.

**Table 2: In-service Teachers' Teaching Beliefs**

Belief statements		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Teachers must know a lot more than students and demonstrate same in classroom instruction	N %	53 (19.2%)	79 (28.6%)	47 (17.0%)	62 (22.5%)	35 (12.7%)
Students learn best by finding solutions to problems on their own	N %	24 (8.7%)	29 (10.5%)	20 (7.2%)	86 (31.2%)	117 42.4 (%)
How much students learn depends on how much knowledge they have; thus teaching facts is necessary	N %	80 (29.0%)	109 39.5 (%)	44 (15.9%)	24 (8.7%)	19 (6.9%)
Students should think of solutions to practical problems themselves before the teacher shows them how to solve	N %	13 (4.7%)	25 (9.1%)	35 (12.7%)	109 (39.5%)	94 (34.1%)
Thinking and reasoning processes are more important than specific curriculum content	N %	12 (4.3%)	16 (5.8%)	42 (15.2%)	94 (34.1%)	112 (40.6%)

Table 2 contains items that relate to teaching philosophies of the surveyed teachers. A considerable number (N=132, i.e., 47.8%) of the respondents deny the possession of more knowledge by teachers than do students. They also reject teachers' demonstration of such knowledge in the classroom. . One can draw inference that although teachers may need to have knowledge for classroom teaching, the surveyed teachers seem to have developed a belief that students also have some knowledge acquired from previous learning experiences that have relevance to, and lay foundations for their current learning. Teachers with such belief play facilitating role during the teaching-learning process where students actively engage in knowledge acquisition by finding solutions to learning problems. Well over 75% of the study participants support the solving of problems by students themselves in order to learn through their own actions. Similarly, about 73.6% of the in-service teachers advance the view that before teachers show ways of solving problems, students must engage in finding solutions themselves. For constructivist oriented teachers, while the students try their level best at devising means of arriving at the general truth, teachers may coach them so as to help them develop insights about the likely solution. That means, they must be shown ways of how to solve those problems after students try and find the activities difficult. This claim emerges from the general assumption by supporters of constructivism that teachers must serve as guides and facilitators who provide scaffolding service whenever students get challenged by a problem at hand.

As part of their teaching belief, the study participants were asked to indicate their level of agreement or disagreement concerning the volume of knowledge to be owned by students, and whether or not teaching facts is the solution to raise the level of students' knowledge. Data in Table 2 depicts that 68.5% of the in-service teachers denounce the importance of teaching facts as a means of raising the volume of knowledge students have. From the result, it can be



concluded that the surveyed teachers give primacy to the means of acquiring knowledge through students' leaning than the amount of prior knowledge possessed. That means, the surveyed teacher believe that learning how to learn is more important than what to learn. If students have the skills of learning at their disposal, they can access or discover their own knowledge using the learning strategies they come across in the process of solving problems.

**Table 3: Assessment beliefs**

Belief statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Poor performance lies below previous performance	4 (1.4%)	6 (2.2%)	23 (8.3%)	87 (31.5%)	156 (56.5%)
The Teacher has to prepare items that promote student's own inquiry	12 (4.3%)	27 (9.8%)	16 (5.8%)	119 (43.1%)	102 (37.0%)
Students should be accessed through various learning activities	4 (1.4%)	6 (2.2%)	23 (8.3%)	87 (31.5%)	156 (56.5%)
Students must give correct answers in written tests	57 (20.7%)	121 (43.8%)	39 (14.1%)	42 (15.2%)	17 (6.2%)
Teachers need to disregard conceptual errors while scoring test items	25 (9.1%)	61 (22.1%)	52 (18.8%)	113 (40.9%)	25 (9.1%)
Good performance means a performance that lies above previous achievement	16 (5.8%)	23 (8.3%)	52 (18.8%)	100 (36.2%)	85 (30.8%)

Table 3 tries to measure teachers' assessment beliefs by using six items stated either positively or negatively. Some of the items in this table intend to identify how teachers perceive good or poor performance, the types of activities students need to be exposed to in order to be assessed as well as the types of answers/responses expected of students in their assessment tasks. As to what type of student's performance is good or poor, the participants were made to indicate their level of agreement using two positively and negatively stated items. About 87% believe that poor performance is one that lies below previous achievement level. In a similar manner, over two-third (i.e., 67%) of the respondents, value good performance as one that lies above previous achievement. Such teachers expect students to perform better and better as they get exposed to various assessment activities and must keep on improving time after time. Scoring lesser in subsequent assessment would indicate poor performance of the student although the achievement may be above expected average for a particular assessment instrument.

Concerning the types of activities that teachers should employ to measure students' performances, there shouldn't be a single and universally applied technique but a mix of various kinds of tools and activities need to be used according to 88% of the respondents while over 80% urge teachers to prepare activities that promote student's own inquiry. Variety and challenge must, therefore, form the basis for assessment by selecting items that enhance critical thinking, analysis and synthesis abilities. Regarding the types of responses expected of the students to the assessment activities, 64.5% refute the fact that students must give correct answers in written

tests. Exactly half the number (N= 138) of the respondents accept the view that ‘*teachers need to disregard conceptual errors while rating student’s works*’

**Table 4: Comparison of beliefs and practices by level of education**

Variables	BA/BSC (N = 93)	Diploma (N=183)	T	P ≤ 0.05	
<b>Planning belief</b>	Mean	2.9839	2.4672		
	SD	3.32109	.91478	1.966	.050
<b>Planning Practice</b>	Mean	3.2581	3.4358	1.460	.146
	SD	1.17113	.82644		
<b>Teaching belief</b>	Mean	3.1321	3.1616	.611	.542
	SD	.40254	.36634		
<b>Teaching practice</b>	Mean	3.7984	3.4179	1.187	.236
	SD	4.28665	.49226		
	SD	1.14563	.95822		
<b>Assessment belief</b>	Mean	3.1165	3.1120	.084	.933
	SD	.38760	.42873		
<b>Assessment Practice</b>	Mean	3.1661	3.2338	1.069	.286
	SD	.40515	.53750		

Participants of the study were compared on the basis of their level of education to see if there is any statistically significant difference among their scores on the three variables that measure beliefs and practices. Data in Table 4 indicates that in almost all cases the mean scores of respondents were better for practice as compared to belief. It can be concluded that most of the in-service trainees develop better plans, teach and assess better than they believe they would do. Independent sample t-test was calculated for the two groups of educational qualification levels. The result indicates that there is no statistically significant difference among the Diploma (N=183) and BA/BSc (N=93) degree holders in terms of their beliefs and practices across all compared variables. This leads us to draw inference that all teacher trainees hold and demonstrate similar beliefs and practices about planning, teaching, and assessment in their specific subject areas without regard to level of education already attained.

Whether or not the beliefs held by the in-service trainees had any effect on practices, partial correlation was computed for belief and practice dimensions. Most belief variables did not show strong relationship with their corresponding practice variables. Planning practice, for example, has low relationship with planning practice. The same holds true for teaching and assessment. Planning belief has negative, but significant relationship ( $r = -.76$ ;  $P = .000$ ) with teaching belief. Planning belief has low negative relationship with teaching practice This relationship is significant at  $p = .05$  level implying the fact that decrease in planning belief resulted in increased teaching practice.

Table 5 compares the Planning, teaching, and assessment practices of teachers against their fields of study. Language teacher teaching practices were compared to those in mathematics, natural as

well as social science fields. The one way Analysis of Variance (ANOVA) result ( $F=.867$ ;  $P=.459$ ) was not statistically significant at .05 level. It can be concluded that teachers in all fields of study demonstrated similar teaching practices that place them in constructivists' realm. The observed mean difference for language teachers may be due to chance error. Concerning assessment practice, teachers in the natural science fields scored better mean value (3.24) compared against those in other fields. The F-test ( $F = .334$ ;  $P = .801$ ) is not statistically significant for any of the groups. Therefore, it would be safe to conclude that despite differences in their fields of study all the in-service teachers pursue similar practices in assessing their students. A mean difference of .09 is noted between teachers in mathematics and those in social science fields. However, the ANOVA result ( $F = .064$ ;  $P = .979$ ) failed to witness prevalence of significant difference between teachers in the four fields of study. As a general rule, inference can be drawn that teachers in language, mathematics, social and natural sciences have similar planning, teaching and assessment practices in their respective schools.

**Table 5: Practices of In-service Teachers by Field of Study**

Major field of study		Teaching practice	Assessment Practice	Planning Practice
Language	N	75	75	75
	Mean	3.9417	3.1867	3.3767
Mathematics	N	25	25	25
	Mean	3.5100	3.1467	3.4300
Natural Science	N	93	93	93
	Mean	3.3990	3.2437	3.3898
Social Science	N	83	83	83
	Mean	3.3645	3.2155	3.3434
Total	N	276	276	276
	Mean	3.5461	3.2110	3.3759
	F	.867	.334	.064
	P	.458	.801	.979

To know whether or not the teachers act consistently with their belief across gender, comparison was made between males and females. The result indicated that both males and females hold similar beliefs about planning, teaching and assessment. They all advance better teaching and assessment belief than their planning beliefs. In addition, the surveyed teachers demonstrate similar practices as related to the three variables. Comparison of mean scores for beliefs and practices show that all the teachers demonstrate better practice than their held beliefs. While females are better in planning beliefs and practices, males excel in teaching and assessment beliefs and practices. The t statistics calculated for both groups were not significant for any of the variables despite the differences noted between males and females. It is therefore, safe to conclude that teachers practice what they believe is right to do. Thus, the surveyed teachers' actions are consistent with their beliefs which were guided by their beliefs. Except for planning belief where teachers tended to be behaviorist, they showed constructivist orientation in all their decisions and actions of teaching and assessment.

**Table 6: Comparison of beliefs and Practices by Sex**

Variables	Belief Mean		Statistics		Practice Mean		Statistics	
	Male (N=149)	Female (N=127)	t	p≤.05	Male (N=149)	Female (N=127)	t	p≤.05
<b>Planning</b>	2.5470	2.7520	818	.414	3.2785	3.4902	1.837	.067
<b>Teaching</b>	3.1745	3.1249	1.086	.278	3.6769	3.3927	.934	.351
<b>Assessment</b>	3.1320	3.0919	801	.424	3.2431	3.1732	1.165	.245

One of the basic research questions intends to know if there are significant relationships between the beliefs and practices across planning, teaching and assessment variables. A paired sample correlation coefficients were calculated for three paired variables. Result indicated the existence of relationship though small in magnitude. Negative relationships were noted between beliefs about, and practices of planning and assessment. That means, when scores on planning and assessment beliefs decreased, measures of practices increased for planning and assessment. The relationship between planning belief and planning practice ( $t=.208$ ;  $P = .000$ ) was significant at 0.05 level. Result of partial correlation indicated the prevalence of relationship among different variables. For example, Planning belief has negative, but significant relationship ( $r = -.76$ ;  $P = .000$ ) with teaching belief. Planning belief has low negative relationship with teaching practice. This relationship is significant at  $p = .05$  level implying the fact that decrease in planning belief resulted in increased teaching practice.

### Discussion

The findings of this study showed congruence between espoused beliefs and perceived practices of the surveyed teachers relating to planning, teaching and assessment variables. All the teachers, irrespective of the subject areas they teach demonstrated better practices compared to the beliefs they advance. There was alignment between belief and practice variables that favor constructivism except for planning belief that was in support of behaviorism. There were also evidence of low relationship between espoused beliefs and perceived practices some of which were statistically significant.

The results tend to contradict with the findings by Cain 2012; Devine, et.al, 2013; Hos and Kekee, 2014; Kahder 2012; Powers, Zippay & Brittany 2006). Cain investigated beliefs about classroom practices of primary teacher trainees in Trinidad and Tobago and found variations in the extent to which the trainees' beliefs influenced their classroom practices. Hos and Kekee (2014) study of EFL teachers' grammar beliefs and classroom practices found discrepancy between beliefs and practices in that, those whose beliefs were in support of Communicative Language Teaching were discovered practicing grammar translation method in their classrooms. Devine, et.al, (2013) found contradictions between teacher beliefs and observed practices.

Powers, Zippay & Brittany (2006) study that investigated connections between teacher beliefs and instructional practices found inconsistency among beliefs and classroom practices of teachers owing to variety of influences including conformity to school philosophies as well as requirements from the side of the government. Findings witnessing the existence of relationship between the belief and practice variables also contradict with Kahder (2012) whose study failed to show statistically significant correlation between pedagogical beliefs and classroom practices of teachers.

Contrary to these, however, the findings of the present study concur with Ertmer, et. al, (2012); Nasir Mahmood (2013; Lin 2010; and Farrell and Ives (2015). Ertmer, et. al, 2012 found that teachers who are pro learner-centered beliefs showed preferences to implement learner-centered curricula despite influences of several challenges. Farrell and Ives (2015) observed evidence of some relationship between beliefs and practices of a reading teacher in many classrooms he taught. Nasir Mahmood (2013), in a case study of elementary science teacher found evidence of practice changing the already formed beliefs. Lin's (2010) study noted the transfer of beliefs into the actual practices in most classrooms of an ESL grammar teacher.

### **Contributions of the findings**

The findings have contributions to raising teachers' tacit knowledge of teaching craft through day-to-day evaluation of match between their held beliefs and demonstrated practices,. Teachers would become aware of their theoretical orientations and teaching behaviors and work hard to discover more about themselves and strive to improve the learning of their students. Such awareness may help teachers reflect on their daily practices and make adjustments between what they believe should be done and what they actually enact in providing instructional services to their students. Knowing that most of their beliefs and practices align with constructivism would help boost self-confidence of these teachers in conveying subject matter contents to their students. In addition, such knowledge would motivate them to revisit their planning beliefs which at present appear to be in support of behaviorist orientation.

Educational administrators may also take measures towards continued improvement of teaching practices of teachers after knowing how teachers are currently performing their tasks. Educational administrators always try to be successful in promoting good teaching and learning environment for better learning and achievement of students in their schools. Having information about the current relationships between beliefs and practices of teachers would help the administrators to encourage teachers and facilitate the arrangement of supportive contingencies that might help raise teachers' commitments for better action. Future research is needed to confirm the findings by using alternate instruments and processes such as interview protocol as well as classroom observation.

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