Implications for Curriculum, Materials, Teaching and Testing Strategies in a Saudi Arabian University

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ABSTRACT
Teaching is a multi-dimensional activity with a lot of societal obligations. This study identifies some of the important aspects namely Curriculum, Teaching Aids, Teaching strategies, and Testing Strategies. Further, it explores the difference in these four aspects with reference to satisfaction of teachers, teachers' experience and across disciplines**.** The researchers consider that this area is unexplored in Kingdom of Saudi Arabia to the best of their knowledge. The chief finding of this study is testing strategies differ with that the level of satisfaction of teachers and also across disciplines, and usage of materials and teaching aids differ across colleges. In contrast to the expectations, curriculum, teaching strategies and testing strategies do not differ among colleges and years of experience. Finally, the study recommends policies to improve the overall teaching process.

KEYWORDS: academic commitment, curriculum, teaching aids, testing strategies

INTRODUCTION

Teaching is considered as one of the best and noblest professions around the world. Teachers should be dedicated, committed, and motivated towards their profession as it is a thankless job. A teacher needs to display his skills to motivate and influence his students. To motivate students, teachers not only have to be committed but also sound enough in their respective branches of knowledge. If a teacher is committed towards his profession and poor in his subject, he won't receive regards from his students and vice-versa. He should be good at subject and committed towards his profession too.

The researchers aim to find out whether the teachers' efforts are sufficient enough towards the profession to bring the desired results. The efforts of the teachers are studied on four aspects. These fours aspects are part of their work every day in the college. They are Curriculum, Teaching Aids, Teaching strategies, and Testing Strategies. At the same time, this study also wishes to explore the difference in these four aspects with reference to teachers' experience and across disciplines**.** The researchers select Prince Sattam Bin Abdulaziz University (PSAU) for their research. The researchers consider that this area is unexplored in Kingdom of Saudi Arabia to the best of their knowledge.

Being an emerging university in this vicinity, PSAU has many promises. We believe that it is the responsibility of the faculty existing in PSAU to fulfill them. The teachers working in it are from within the nation and various parts of the world. We want to identify how the faculty is working homogeneously for a common cause, i.e., shaping careers of the students. The commitment of the faculty not only will make PSAU reach its mission but also benefits the students. Hence the objectives of the current study are:

- To investigate the teachers' view about the Curriculum of PSAU
- To investigate the teachers' view about the use of Teaching aids in PSAU
- To investigate the teachers' view about the Teaching strategies in PSAU
- To investigate the teachers' view about the Testing Strategies used in PSAU

REVIEW OF THE LITERATURE

CURRICULUM

A curriculum is a plan or a program for teaching and learning prepared in the light of certain goals and which contains at least a reference to select and sequence learning content. Henderson &Hawthorne say that curriculum is, "...a plan for a pedagogical journey towards the good life, or students' actual classroom management with ideas and ways of knowing...", and "...depending on national, state, and local policy, it may also be understood as a course of study, a syllabus, or a group of text books or tests (2000: 3)". Bell & Baker opine that there are

various types of meaning for curriculum that may differ from the formal or teacher-intended curriculum (1997:3).

The curriculum of PSAU is organized. It is tailor made. The policy makers of the university have given liberty to teachers to make changes to the curriculum as per the needs and demands of the students and the society. The changes have to be made every semester, and it should be discussed in department council, college council, and university council for approval. The teachers can propose a maximum of twenty-five percent of change to the existing curriculum. This policy gives a great strength to the teachers as they observe and live with students round the semester. Besides, the courses prescribed to the students need to be updated constantly as per the needs of the society in their respective branches of knowledge.

The researchers aim to know from the faculty if the syllabus prescribed in their respective colleges is too much for the students. In addition, they want to explore how far the learning outcomes of the course are met with the syllabus prescribed. They further want to study if the faculty is aware of the learning outcomes of the course as they need to make changes to the course, if necessary. In addition to these, they also study if the faculty in their respective colleges is taking liberty with the syllabus for the benefit of the students and their own comfort.

TEACHING AIDS

Learning is a difficult practice. It can be strengthened with unusual instruction/educational resources as they inspire, encourage as well as make students' concentrate during the learning process. According to Ranasinghe and Leisher (2009), technology can be integrated into teaching if a teacher is determined to use it in his classrooms wherever it is necessary. They further opine that technology should support teachers in creating a learner-centric atmosphere in the classrooms. Koc (2005) suggests that if curriculum collaborates with technology, it yields outstanding results in academics as it certainly assists students to gain higher-order thinking skills. Romiszowski claims that, "a teaching aid must, as the name suggests, assist the teaching of the topic. It does not do the whole job. Other methods perform parts of the jobs and the aid is administered and controlled by the teacher (1968:11)". Chacko (1981) opines that good teaching learning materials certainly reduces the language barrier. He further opines that they will provide exact visual image and that in turn makes learning process easier. Morris (1968) believes that teachers use these materials consciously as they know the positive effect of these on the students.

PSAU has state of the art classrooms. Every college possesses white, active, and smart boards. They not only help teachers in teaching-learning process but also motivate students to learn interestingly. English language is complex to the students in KSA. At the same time, classroom teaching-learning process should be in English as per the university policy. Owing to this, the teachers with the support of technological aids reach students. As the students have little English language skills, technological aids assist teachers a lot. These boards are used for PPTs, writing on them with Activpens, drawing graphs instantaneously, uploading documents & images from the laptop, and etc. Videos and audios can also be played. Owing to all of these benefits, students find classes highly enthusiastic. In this regard, the researchers intend to identify the technological usage of the teachers in PSAU. They ask the teachers if the interactive methods help to reinforce the teaching learning process.

The mere usage of teaching materials doesn't bring any outstanding result among students. If teachers can sensibly select the materials and combine them during their teaching learning process, the students will get benefitted. To identify the effectiveness of teaching resources the researchers put three statements to the teachers in their questionnaire to respond. The first one is if the textbook is sufficient to cover the course. The second one is if additional reference books, handouts and teaching aids are used during teaching. Finally, if they also rely on online practice content along with boards available, while teaching.

TEACHING STRATEGIES

Traditional approach to teaching is – teachers teach, and learners learn. It's a one way and passive approach. In contrast, the modern teaching methods give an ample of scope to teachers to teach and learners to learn. De Caprariis, Barman, & Magee (2001) suggest that lecture leads to the ability to recall facts, but discussion produces higher level comprehension.

As per Henson,

> Today's education majors are asking different questions because they recognize that there are many teaching methods -expository, inquiry, questioning, discovery, simulation gaming... The old question "Which one should I use?"has given way to a new one: "Which *ones* should I use? and for what purposes?" Education students, who are now exposed to a number of teaching methods, know that certain methods work best with certain objectives. (1988:89)

Yelon (1996) states the following powerful principles for effective teaching:

- Help students make meaningful connections systematically
- Analyze prerequisites of required tasks
- Create a climate for open communication
- Organize essential content
- Provide effective learning aids
- Capture and maintain attention through the use of novelty model
- Provide active individual practice
- Create pleasant conditions and surrounding
- Be consistent

According to Westbrook, Durrani, Brown, Orr, Pryor, Boddy& Salvi (2013), there are six teaching observations that are essential for an effective and prompt learning. They are:

- Balancing class through group work and pair work
- Providing handouts beyond the prescribed textbook
- Diversified testing like open-ended and close-ended questions, elaborated answers & motivating students to put questions
- Effective academic involvement while explaining the concepts and projecting strong knowledge on it
- Using vernacular language and code switching
- Following variety of teaching styles

A few of these teaching observations are part of our questionnaire. The researchers focus to identify if the teachers in PSAU design the classroom activities as per the needs of the students, if they provide additional handouts to reinforce the concepts taught in the class, and if they involve students for their better understanding.

TESTING STRATEGIES

Many educationalists write about the power of examinations over what takes place in the classrooms. Pearson states that it is generally accepted that public examinations influence the attitudes, behavior, and motivation of teachers, learners, and parents (1988:98).

Frederiksen and Collins (1989) states that:

> "A systematically valid test is one that induces in the education system curricular and instructional changes that foster the development of the cognitive skills that the test is designed to measure. Evidence for systematic validity would be an improvement in those skills after the test has been in place within the educational system for a period of time (1989:27)".

The previous studies on teachers' testing skills reveal that teachers are not adequately ready to meet the needs of classroom assessment due to inadequate training (Goslin, 1967; Roeder, 1972; O'Sullivan&Chalnick, 1992). Teachers report that they are engaged in teaching syllabus, flexible with exam timing, supporting students during exam, and altering answers in the scripts (Hall &Kleine, 1992; Nolen, Haladyna, & Haas, 1992). A good number of teachers believe that they have sufficient knowledge of testing students' learning skills (Gullikson, 1984; Kennedy, 1993) and point that knowledge to their experience and university coursework (Gullikson, 1984; Wise, Lukin, &Roos, 1991). Carey (1994) and Gregory (1996) emphasize that teachers have ability to make necessary changes to the methods of testing now and then based on test results and item analysis.

Keeping in view the opinions of the theorists, the researchers designed a few statements to study teachers' approach towards testing. They are like if they want to test only objective questions in their exams; if they want to avoid subjective questions; if they don't teach that is not tested; and if they accept that exams are the best way to test students' knowledge.

The researchers take the above studies into confidence and designed a diversified questionnaire which is a combination of some of the aspects they mentioned. The earlier studies have focused on any one of them but not all are integrated to the best of the knowledge of the researchers.

METHODOLOGY

The researchers target to measure the commitment of teachers towards the four identified items namely, curriculum and syllabus; materials and aids; teaching strategies and finally testing strategies.

On the basis of the studies quoted above four statements are framed for each of the items. Hence, there are sixteen statements in total on which the respondents are supposed to mark their responses on Likert scale of five. All the Likert items are ranked viz., strongly agree is denoted by 1 and agree by 2, neutral by 3, disagree by 4 and strongly disagree by 5. The reliability of the questionnaire is tested using Cronbach Alpha. Besides this, three categorical questions are also part of the questionnaire. The first question is, "Are your efforts in teaching sufficient to bring the desired results?". The respondents are supposed to answer 'Yes or No'. Second, each respondent is asked to state his college of affiliation. The third one is related to years of teaching experience of the faculty. The experience of the faculty is further divided into three categories: 0-5 years, 5-10 years and 10 and above years. The questionnaire is administered to faculty at 13 different colleges of Prince Sattam bin Abdul-Aziz University. The different colleges represent different disciplines. A total of 174 faculty fill the questionnaire but only 159 questionnaires are used in the analysis as the unused 15 questionnaires contains incomplete responses. Finally, a set of 12 hypotheses are derived by the researchers to test based on the questionnaire. The first four hypotheses are regarding to find out the significant difference in terms of curriculum; materials & teaching aids; teaching strategies; and testing strategies among those who are satisfied with their efforts to bring desired results in teaching. The next four hypotheses test the significant difference in terms of all same four items with respect to colleges of affiliation. And the last four hypotheses test the significant difference considering again the four items and the years of teaching experience.

Demographic Characteristics	
Gender of respondents	
Male respondents	136
Female respondents	23
Total respondents	159
College of affiliation	
College of Business Administration, Al Kharj	24
College of Engineering	10
College of Medical Sciences	8
Preparatory Year College	22
College of Pharmacy	11
Community college	18
College of Business, Howtah	15
College of Business Administration, Al Kharj (Girls' campus)	8
College of Engineering & Computer Science (Girls' campus)	10
College of Computer Science	13
College of Pharmacy (Girls' campus)	5
College of Science	12
College of Business, Sulayl	3
Years of experience	
Less than 5 years	72
5 to 10 years	77
10 years and above	10

The value of Cronbach Alpha is 0.71. The questionnaire can be considered reliable or internally consistent. To test the significant difference between two groups, Students t-test is used and to test the difference among more than two groups Analysis of variance (ANOVA) is used. The level of confidence used is 95 percent. The alternate hypothesis is accepted when the p value in less than 0.05 for 95 percent level of confidence.

S.No.	Statement	Item Mean	Factor Mean	Item Std Dev	Factor Std Dev
Curriculum					
1	I am aware of the course learning outcomes.	1.31	2.05	0.49	0.77
2	The curriculum covers the course learning outcomes.	1.69		0.70	
3	Based on the needs, I modify the syllabus	2.09		1.03	
4	I feel the syllabus prescribed is too much for the students.	3.09		1.12	
Materials & Teaching Aids					
5	The textbook is sufficient to cover the course.	2.20	2.44	0.87	0.92
6	Additional reference books and handouts are used during teaching.	2.13		0.94	
7	PPTs, videos and other interactive methods reinforce the teaching learning process.	1.67		0.81	
8	I do not use online resources for teaching.	3.77		1.15	
Teaching Strategies					
9	Classroom activities are designed as per the needs and abilities of the students.	1.91	1.97	0.81	0.46
10	Assignments and projects help in reinforcing the concepts taught in the class.	1.69		0.75	
11	Essay type analytical questions in the exam won't affect my current teaching method.	2.64		1.03	
12	Before I introduce another topic to students, I ask them, many a time, if they understand the present topic.	1.64		0.77	
Testing Strategies					
13	MCQs, True/False and Fill in the blank questions are easy for the students.	2.39	2.67	1.05	0.67
14	Essay type questions are not easy for the students due to language issues.	2.08		0.98	
15	I won't teach the content that is not tested in the exam.	3.62		1.14	
16	Exams are the best way to evaluate the effectiveness of the students' learning.	2.60		1.13	

Out of all the twelve-hypothesis derived, the following two are found to be significant.

1. Ho: There is no significant difference between those who feel that their efforts in teaching are sufficient to bring the desired results, and those who feel otherwise, in terms of testing strategies.

Ha: There is a significant difference between those who feel that their efforts in teaching sufficiently bring the desired results, and those who feel otherwise, in terms of testing strategies (Accepted).

As the p value is 0.00 (Appendix 1) which is less than 0.05, the null hypothesis is not accepted. Contrary the alternate hypothesis is accepted. It implies that there is difference in the level of satisfaction among teachers in the use of testing strategies. This hints that there is difference in the usage of objective type of questions in exams like MCQs or using subjective type of questions. On an average the teachers also agree that MCQs are easy for students and subjective questions are difficult. The other aspect is teachers disagree that they teach the content that will come in the exam. Lastly, teachers generally agree that exams are the best way to evaluate the effectiveness of the students' learning.

2. Ho: There is no significant difference among different colleges in the university, in terms of the materials and aids they are using.
   Ha: There is a significant difference among different colleges in the university, in terms of the materials and aids they are using (Accepted).

The p value for this hypothesis is 0.021(Appendix 2). As the p value is less than 0.05, the null hypothesis is rejected. The alternate hypothesis is accepted which implies that there is difference among colleges in terms of usage of materials and aids. This result is quite surprising as all the classrooms are equipped with same

technological support and all course instructors are advised to use them during their lectures. They are also instructed to use online resources, wherever necessary, in their respective course specifications.

ANALYSIS

The researchers' study identifies the level of satisfaction of teachers differs with testing strategies and there is a difference among colleges in the use of teaching aids. Curriculum, teaching strategies and testing strategies are used in the same way without any differences among colleges as per the study and it is also noticed that these aspects are used in the same way, though the years of experience of faculty vary.

The result related to curriculum is logically comprehensible as the university follows a defined curriculum which is common across all sections of the same course in the colleges it is taught. It is the same with materials and teaching aids viz., library facilities, smart boards, etc. are common across all the colleges. Interestingly, when materials &teaching aids and level of satisfaction of faculty in using them are related, the researchers find that there is no significant difference in using them by faculty, within the college. In contrast, there is a significant difference among colleges in using them. This difference gives a chance to the researchers to state that teaching aids are used differently from one college to another in PSAU. Though PSAU provides guidelines to teachers on using these resources in the classrooms, the difference exists from one college to another. The last one, testing strategies are not significantly different among colleges. It is because, the testing pattern is also structured with 50% of the marks for internal assessments including quizzes, assignments, projects etc. while the remaining 50% of the marks are allotted to the final exams held at the end of the semester. There is no room for the faculty to innovate different testing patterns while testing during examinations. One of the reasons for this is due to fixed way of testing like objective pattern. Further, the respondents are categorized in terms of years of experience. It is found that there is no difference between teachers' experience and their attitude towards curriculum, teaching and testing strategies. But when it comes to satisfaction of teachers in using the testing strategies, there is a significant difference. It is understood, based on the study, that satisfaction of teachers in using the testing strategies and using materials and aids vary from college to college in the university.

CONCLUSION

The current study will certainly assist the top administration of PSAU to make remarkable decisions in future. It has been noticed by the researchers that the way the teachers test their students, as per study, is limited. As there is fixed regulation in the way the examinations need to be conducted, it gives no room for faculty to innovate in PSAU. As it is a limitation of this study to identify what exactly are the testing strategies used by teachers for the betterment of the students, this study recommends the university to look into this matter. The teachers who continuously make changes to the assessment need to be identified and encouraged to discuss the assessment methods with the rest of the faculty. Hence, it leads to the overall development of the stakeholders.

The other noticeable thing is teaching aids used in the university. The policy makers are recommended to focus on this as faculty in each college are not satisfied on using them. The researchers are also under the impression that the use of interactive methods is also common across colleges. In this regard, a policy implication in terms of identifying colleges and their needs and usage of materials and aids is recommended.

It's logical to assume that teaching methods improve with experience. It is recommended that the university should reap benefits of these experienced teachers and utilize them for training the new faculty. The study can further be focused to find the difference in the commitment regarding the four factors among the universities in one region and also among different regions. The study finally concludes that the recommendations can be considered for the progress among teaching fraternity specially to cope them with the teaching methodologies and testing patterns.

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APPENDICES

A. NULL HYPOTHESES

1. Ho: There is no significant difference between those who feel that their efforts in teaching are sufficient to bring the desired results, and those who feel otherwise, in terms of Curriculum.
2. Ho: There is no significant difference between those who feel that their efforts in teaching are sufficient to bring the desired results, and those who feel otherwise, in terms of Materials & Teaching Aids.
3. Ho: There is no significant difference between those who feel that their efforts in teaching are sufficient to bring the desired results, and those who feel otherwise, in terms of teaching strategies.
4. Ho: There is no significant difference between those who feel that their efforts in teaching are sufficient to bring the desired results, and those who feel otherwise, in terms of testing strategies.
5. Ho: Curriculumused by the faculty are same across all the colleges
6. Ho: Materials & Teaching Aids used by the faculty are same across all the colleges
7. Ho: Teaching strategies used by the faculty are same across all the colleges
8. Ho: Testing strategies used by the faculty are same across all the colleges
9. Ho: The Curriculum used by the faculty in all the colleges are the same irrespective of experience
10. Ho: The Materials & Teaching Aids used by the faculty in all the colleges are the same irrespective of experience
11. Ho: The teaching strategies used by the faculty in all the colleges are the same irrespective of experience
12. Ho: The testing strategies used by the faculty in all the colleges are the same irrespective of experience

B. STATISTICAL TABLES

1. SATISFACTION

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
			Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
curriculum	Equal variances assumed	1.27	0.26	-0.99	157.00	0.32	-0.09	0.09	-0.27	0.09
	Equal variances not assumed			-0.94	54.76	0.35	-0.09	0.10	-0.28	0.10
materials	Equal variances assumed	1.74	0.19	-1.35	157.00	0.18	-0.11	0.08	-0.26	0.05
	Equal variances not assumed			-1.25	53.36	0.22	-0.11	0.09	-0.28	0.06
teaching	Equal variances assumed	0.93	0.34	0.58	157.00	0.56	0.06	0.10	-0.14	0.25
	Equal variances not assumed			0.55	55.74	0.58	0.06	0.10	-0.15	0.26
testing	Equal variances assumed	2.61	0.11	-2.92	157.00	0.00	-0.33	0.11	-0.55	-0.11
	Equal variances not assumed			-2.44	47.54	0.02	-0.33	0.13	-0.60	-0.06

Group Statistics					
	sat	N	Mean	Std. Deviation	Std. Error Mean
curriculum	1	122	2.0246	0.47173	0.04271
	2	37	2.1149	0.52571	0.08643
materials	1	122	2.4201	0.4069	0.03684
	2	37	2.527	0.47061	0.07737
teaching	1	122	1.9822	0.51081	0.04625
	2	37	1.9257	0.55548	0.09132
testing	1	122	2.5984	0.53932	0.04883

	2	37	2.9257	0.75889	0.12476

2. COLLEGES

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
curriculum	1	24	2.0625	0.46771	0.09547	1.865	2.26	1.25	2.75
	2	10	2.275	0.41583	0.1315	1.9775	2.5725	1.75	3
	3	8	2.125	0.48181	0.17035	1.7222	2.5278	1.25	2.75
	4	22	1.8864	0.57594	0.12279	1.631	2.1417	1.25	3.5
	5	11	2.2727	0.52979	0.15974	1.9168	2.6286	1.5	3
	6	18	1.875	0.3237	0.0763	1.714	2.036	1.25	2.25
	7	15	2.0167	0.44788	0.11564	1.7686	2.2647	1.25	3
	8	8	2.25	0.46291	0.16366	1.863	2.637	1.5	3
	9	10	2.15	0.41164	0.13017	1.8555	2.4445	1.75	3
	10	13	2.0769	0.4608	0.1278	1.7985	2.3554	1.5	2.75
	11	5	1.8	0.37081	0.16583	1.3396	2.2604	1.25	2.25
	12	12	2.125	0.62614	0.18075	1.7272	2.5228	1.25	3.25
	13	3	1.5	0.25	0.14434	0.879	2.121	1.25	1.75
	Total	159	2.0456	0.48462	0.03843	1.9697	2.1215	1.25	3.5
materials	1	24	2.3333	0.45245	0.09236	2.1423	2.5244	1.25	3
	2	10	2.475	0.2993	0.09465	2.2609	2.6891	2	2.75
	3	8	2.4688	0.41052	0.14514	2.1255	2.812	2	3.25
	4	22	2.4091	0.34109	0.07272	2.2579	2.5603	1.75	3
	5	11	2.5227	0.17516	0.05281	2.4051	2.6404	2.25	2.75
	6	18	2.4444	0.43348	0.10217	2.2289	2.66	2	3.75
	7	15	2.45	0.5278	0.13628	2.1577	2.7423	1.75	3.5
	8	8	2.2812	0.2815	0.09952	2.0459	2.5166	2	2.75
	9	10	2.475	0.46323	0.14649	2.1436	2.8064	1.75	3
	10	13	2.7885	0.39325	0.10907	2.5508	3.0261	2	3.25
	11	5	1.85	0.54772	0.24495	1.1699	2.5301	1	2.5
	12	12	2.5208	0.37626	0.10862	2.2818	2.7599	1.75	3
	13	3	2.6667	0.52042	0.30046	1.3739	3.9595	2.25	3.25
	Total	159	2.445	0.42345	0.03358	2.3786	2.5113	1	3.75
teaching	1	24	1.8438	0.36722	0.07496	1.6887	1.9988	1	2.5
	2	10	2	0.57735	0.18257	1.587	2.413	1	2.5
	3	8	2	0.65465	0.23146	1.4527	2.5473	1	3
	4	22	2.197	0.44361	0.09458	2.0003	2.3937	1.75	3
	5	11	2.25	0.59161	0.17838	1.8526	2.6474	1.5	3.25
	6	18	1.8333	0.46177	0.10884	1.6037	2.063	1	2.5
	7	15	2.0167	0.64411	0.16631	1.66	2.3734	1.25	3.5
	8	8	1.6562	0.42125	0.14894	1.3041	2.0084	1	2.25
	9	10	1.775	0.44799	0.14167	1.4545	2.0955	1	2.25
	10	13	2.0192	0.52502	0.14561	1.702	2.3365	1	2.75
	11	5	2.15	1.00933	0.45139	0.8967	3.4033	1	3.25

	12	12	1.875	0.41969	0.12115	1.6083	2.1417	1	2.5
	13	3	2	0	0	2	2	2	2
	Total	159	1.9691	0.52029	0.04126	1.8876	2.0506	1	3.5
testing	1	24	2.7708	0.54632	0.11152	2.5401	3.0015	2	4.25
	2	10	2.725	0.32167	0.10172	2.4949	2.9551	2	3
	3	8	2.7188	0.8908	0.31495	1.974	3.4635	1	3.75
	4	22	2.6023	0.46713	0.09959	2.3952	2.8094	1.5	3.5
	5	11	2.4318	0.70791	0.21344	1.9562	2.9074	1.25	4
	6	18	2.7639	0.68316	0.16102	2.4242	3.1036	1.5	3.5
	7	15	2.6333	0.5164	0.13333	2.3474	2.9193	1.5	3.5
	8	8	2.5938	0.69356	0.24521	2.0139	3.1736	1.75	4
	9	10	2.725	0.34258	0.10833	2.4799	2.9701	2.25	3.5
	10	13	2.3654	0.47451	0.13161	2.0786	2.6521	1.75	3
	11	5	2.15	0.37914	0.16956	1.6792	2.6208	1.75	2.75
	12	12	3.1667	0.91287	0.26352	2.5867	3.7467	2	5
	13	3	3	0.43301	0.25	1.9243	4.0757	2.75	3.5
	Total	159	2.6745	0.61092	0.04845	2.5788	2.7702	1	5

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
curriculum	Between Groups	3.972	12	0.331	1.458	0.146
	Within Groups	33.135	146	0.227		
	Total	37.107	158			
materials	Between Groups	4.152	12	0.346	2.089	0.021
	Within Groups	24.179	146	0.166		
	Total	28.331	158			
teaching	Between Groups	4.235	12	0.353	1.337	0.204
	Within Groups	38.536	146	0.264		
	Total	42.772	158			
testing	Between Groups	7.116	12	0.593	1.67	0.079
	Within Groups	51.854	146	0.355		
	Total	58.969	158			

3. EXPERIENCE

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
curriculum	1	72	2.0556	0.45815	0.05399	1.9479	2.1632	1.25	3
	2	77	2.0649	0.51042	0.05817	1.9491	2.1808	1.25	3.5
	3	10	1.825	0.4572	0.14458	1.4979	2.1521	1.25	2.5
	Total	159	2.0456	0.48462	0.03843	1.9697	2.1215	1.25	3.5
materials	1	72	2.3819	0.42784	0.05042	2.2814	2.4825	1.25	3.75
	2	77	2.5	0.4292	0.04891	2.4026	2.5974	1	3.5
	3	10	2.475	0.2993	0.09465	2.2609	2.6891	2	3

	Total	159	2.445	0.42345	0.03358	2.3786	2.5113	1	3.75
teaching	1	72	1.897	0.47523	0.05601	1.7853	2.0087	1	3.5
	2	77	2.0649	0.54169	0.06173	1.942	2.1879	1	3.5
	3	10	1.75	0.56519	0.17873	1.3457	2.1543	1	2.5
	Total	159	1.9691	0.52029	0.04126	1.8876	2.0506	1	3.5
testing	1	72	2.6319	0.58588	0.06905	2.4943	2.7696	1.5	4.25
	2	77	2.6818	0.58298	0.06644	2.5495	2.8141	1.25	5
	3	10	2.925	0.94318	0.29826	2.2503	3.5997	1	4.75
	Total	159	2.6745	0.61092	0.04845	2.5788	2.7702	1	5

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
curriculum	Between Groups	0.523	2	0.261	1.114	0.331
	Within Groups	36.584	156	0.235		
	Total	37.107	158			
materials	Between Groups	0.528	2	0.264	1.482	0.23
	Within Groups	27.803	156	0.178		
	Total	28.331	158			
teaching	Between Groups	1.562	2	0.781	2.956	0.055
	Within Groups	41.21	156	0.264		
	Total	42.772	158			
testing	Between Groups	0.762	2	0.381	1.021	0.363
	Within Groups	58.207	156	0.373		
	Total	58.969	158			

4. RELIABILITY STATISTICS

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.718	0.715	30