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Analysis on Level of Effectiveness Teacher Behavior of Science Faculty Members through Percentage Analysis

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Abstract – Education is the fundamental power and source, which impacts the quality of life. It is the development of every one of those limits in the person, which will empower him/her to control his/her environment and satisfy his/her conceivable outcomes. It has accepted more significance today than any time in recent memory, due to its present job. It is adding new dimensions to our present and future situation. Education is the purposeful and systematic impact, applied by the develop individual upon the youthful through guidance, discipline and agreeable development of physical, intellectual, esthetic, social and otherworldly powers of human being as indicated by individual and social need coordinated towards the association of the informed with his/her maker as the last end. Science is one of those human exercises that man has made to satisfy certain human needs and wants. The science teacher ought to have the general characteristics: Effective personality; Self-certainty; Leadership and love for control; Patience; Affectionate behavior; Hard work and duty; Impartial behavior and mentality; Plain speaking; A great communicator of thoughts; Studious and learned; Sincerity of direction, and exceptional characteristics: Thorough knowledge of the historical backdrop of science; Knowledge of the methods of teaching science; Knowledge of brain science identified with science teaching; Knowledge of the new system of examination; Knowledge of medical aid; Taste for scientific exercises; Efficiency in the preparation and utilization of teaching helps; Scientific reasoning and demeanor. In this Article we will analyze Teacher Effectiveness and its Dimensions of Science Faculty Members and Level of effectiveness-Teacher behavior-of science faculty members.

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I. INTRODUCTION

The rapid development of science is revolutionizing the state of life and society. Its impact is currently felt in each stroll of our life. Not exclusively are the methods for production and industries dependent on science however developments in medication, farming, animal husbandry and practices of general health and sanitation depend on applications of science. Creations and disclosures of science are making the lives of current residents healthier and more joyful. Regardless of whether he needs or not, science has turned into a piece of the texture of everyone, obtain a command of scientific principles and ideas however must be acquainted with the scientific vocabulary so as to comprehend the world he lives and where he works and to participate wisely in his future development. "Scientific proficiency" is in this manner progressively getting to be essential for everybody. Science has in this way turned into an integral piece of general education. The future national needs to learn science as much as the customary ' Three R's, Truth be told, it might now be viewed as the 'Fourth R's ' of the educational edge. Current science and its application in practically all human territories have made a condition of imbalance between the health and life of scientific achievements from one viewpoint and our fairly in reverse social achievements on the other. To restore this imbalance is a standout amongst the most basic prerequisites of current occasions and it requests earnestly that the fullest consideration be given by every one of the pioneers of science and open issues to the different issues included.

1.1 EDUCATION

Education empowers an individual to encourage one's obligations and duties to oneself, to the family, to the general public and to the Nation and help him to carry on with an effective and significant life that moves and aides the more youthful age. Both the laypersons and professional educators accept solidly that the effectiveness of an educational program is generally controlled by the quality of teachers as they decipher, soak up and transmit learning and scholarly conventions from age to age. The significance of teacher during

the time spent education is of incredible value. "Of all the diverse variables, which impact the quality of education and its commitment to National Development, the quality, competence and characters of teachers are without a doubt the most noteworthy. In the expressions of Kothari D.S. "A correct sort of teacher is one who has a distinctive consciousness of two missions. He cherishes his subject, yet additionally adores whom he educates. His prosperity will be estimated not regarding level of the outcome alone, yet by the quality of life and character of men and women whom he has instructed" [1].

Effective education can be accomplished through the endeavors of very much qualified, competent and effective teachers. Contingent upon the demands of the period, the educational points and targets change very quickly. These demands affect the educational framework. Each nation builds up its arrangement of education to address the difficulties of evolving times. India being a creating nation, the teachers have the incredible duty of making the students sufficiently competent to stand with their partners in the created nations and to make the nation monetarily free. To hold the selected masses in the classroom, to make genuine education conceivable, to build the dimension of achievement, to tap the possibilities of the students and to improve educational standards astoundingly, the teacher ought not exclusively be submitted and gave yet in addition be competent and effective. To form the students into perfect vote based native with efficiency and aptitude, the teachers' ought to be praiseworthy, competent and effective and dedicated to the calling with skill and judgment. Effective teaching must be seen in connection to effective learning.

1.1.1 Characteristics of a Teacher

Educators are responsible to work as catalysts to promote progressive transmission through the complex process of education. Education Sanctions as an operator of both transmission and transformation of culture. In the traditional classroom the educator controls all exercises entirely. The modern principles of education advocate a lowering of the educator's authority permitting greater inclusion of understudies, with the goal that the learners can express their needs, make their own esteem system and ways to deal with the act of educational modules. To train effectively one must possess considerable skills, knowledge, patience, caring, and duty. Be that as it may, these are not enough. He/she should likewise possess understanding. One must comprehend himself/herself and those with whom he/she works just as the various contexts in which he/she works. Inability to comprehend the connections between the various contexts-classroom setting, educational system, rules and regulations or how they can influence training will lead to ineffective performance, frustration and career change [2].

The term teacher effectiveness alludes to the proportion of achievement of teacher in doing institutional and other indicated obligations demanded by the idea of his/her position. Teacher effectiveness incorporate efficacy in techniques of guidance, student and classroom management, bury individual relations, assessment and feedback and so on. The teacher effectiveness is comprised of two natural words 'teacher' and 'effectiveness'. Teacher is an individual who educates for example bestow knowledge or skills to the student. 'Effectiveness' is the quality of being fruitful in delivering a proposed outcome' (Collin's English Dictionary)

1.2 TEACHING COMPETENCY

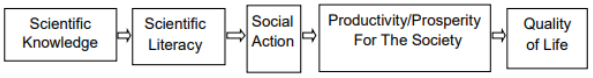
Teaching establishes one of the significant assignments of a teacher. Competency over this errand of teaching is the substance of a fruitful educational framework. Competency alludes to characterized by different creators; it included knowledge, attitudes, and skills and other teacher characteristics. Produce planned endeavors. Teaching is skilled employment and complex assignment, which is done to acquire alluring changes or improvement the practices of students. Accomplishment of this activity depends up on a decent planning and authority execution. The educationist, analyst, inquire about laborers and the teachers working in the field have built up some broad standards and proverbs of teaching, which may demonstrate very supportive in making the errand of teaching very effective and deliberate [3].

One could think of any number of meanings of the term competency. Different lexical definitions were considered alongside suggested definitions once the majority of the sources had been arranged and cautiously considered, a definition that expressed the expectation of competency in an online education setting was produced, in this competency will allude to proper earlier knowledge, skills, attitudes, and capacities in given setting that modify and create with time and needs so as to effectively and proficiently achieve an errand and that are estimated against a base standard. Be that as it may, I don't get it's meaning to be competent? It is more than basically an alignment to a competency. It is just a guide spreading out the knowledge, skills, attitudes, and capacities expected in a competent educator. To be competent isn't the mindfulness, the attainment, or even the knowledge of the different qualities inside the document, albeit these have an influence. To be competent is the juxtaposition of this knowledge with the utilization of that knowledge in a teaching practice. As it were, a competent individual is one who effectively and proficiently achieves an errand [instructs] in a given setting, utilizing suitable

knowledge, skills, attitudes, and capacities that have balanced and created with time and needs.

1.3 TEACHING OF SCIENCE

The twenty first century, bound with profoundly progressed logical knowledge and technology, with a solid desire to investigate and vanquish the universe, the knowledge of science and development of logical temper has turned into a basic requirement. An exhaustive understanding of science and logical methods prompts logical humanism wherein the general populations has a command of logical idea and language, are objective and systematic with a normal standpoint and have a capacity to settle on sound decisions.



Science as a subject is for the most part misjudged to be a lot of ideas, hypotheses and standards to be learnt by heart. Science isn't 'an agglomeration of bits of learning and intellectual instruments to be attached on to a person who generally continues in the entirety of his conventional attitudes and behavior'. Science is the scan for knowledge and understanding of nature and clarification of regular phenomenon. Science is a mindset, a method for acting, an approach street to new knowledge. The knowledge of science should prepare an individual to think in a balanced way, to be dependable and systematic, honest and genuine, earnest and dedicated.

1.3.1 Specific Characteristics of a Science Teacher

Science education relies upon science teaching, which relies upon science educators. Science educators, other than having all desirable, personal and professional qualities of instructors when all is said in done, ought to have certain exceptional and personal qualities to suit the novel requests of science teaching. These are given in 3 classes: 10 (I) Personal rationality of science (ii) Personal life and teaching style and (iii) Personal knowledge of learners and learning.

1.3.2 Personal philosophy of science

The most vital trademark required of a science instructor is the personal reasoning of science that acknowledges the solidarity of sciences. An educator should see various specialized sciences as arbitrary sub-divisions of the bigger science. The wide and holistic perspective of science is valuable to individuals with the end goal of general education.

1.4 TEACHER COMPETENCY IN SCIENCE TEACHING

Science has added another measurement to education and to its job in the life of a country, however fundamental to this is the quality of education "If Science is ineffectively taught and badly learnt, it is minimal more than burdening the brain with dead data and it could degenerate even into another superstition. So what we frantically require is improvement in the standard and quality of science education. Achievement of this quality in science education at all dimension in the nation requests serious and sustained efforts, full and vivacious government, public help or more all it needs the determination, diligent work, dedication and brilliance with respect to the science instructors. On the off chance that we need to exploit the most extreme from a course in science, it ought to be taught more as a process than as an item. Science as a process develops numerous qualities of heart. It develops national thinking, maturity in standpoint and broadness of heart. It teaches the brain and hones the astuteness. An educational program, similar to some other activity is sorted out around certain desires which may differently be named as points, objectives, results or goals. Education actually, a process of realizing change in the person in a desired direction to empower him to perform certain skills to build up certain understandings, thinking processes, insights, attitudes, and so forth to add to his supply of knowledge and subsequently to lead a cheerful productive and socially acceptable life. Science is one of the essential educational programs (activity) which is currently universalized from the establishment of educational career or school level since modern status requires men with scientific thinking and training, for example, engineers, specialists, physicists, physicists, agriculturalists, horticulturalists, genecists and so on. On the off chance that the school does not give science as a subject, numerous pupils may never get an opportunity of seeing whether they have the disposition and enthusiasm for the subject.

"The National Science Teachers Association, Washington, started a program to improve the science and arithmetic foundation of instructors. The generally speaking long range objectives of the science program displayed one analysis, which has been voiced by researchers and science instructors is that, High School science educators are presenting science as a gathering of unrelated facts. The educators are confusing science with technology and the pupils have not been allowed to improve and formulate their own problems and workout schemes for uncovering facts for themselves. At the end of the day, science instructing in schools has fail to present to the

pupils an understanding of the strategies utilized by researchers to obtain data."

II. REVIEW OF LITERATURE

Abdul Rahim Hamdan (2010) [4] conducted an investigation of Teacher Competence among Malesian School Teachers. The examination was conducted taking an example of 309 educators having a place with various secondary schools in Johor Bahru. The investigation was pointed in deciding their competencies as to their teaching skills, instructional methodologies, classroom the board and reception of novel techniques for teaching and assessment. The investigation revealed that every one of the educators were competent and there existed a significant relationship of sexual orientation, teaching experience and specialization with their competence, whereas academic capability had no significant influence on their teaching competence.

Natrajan (2014) [5] in an investigation on competency-based programmes in teacher education curriculum presumed that competency-based guidance demonstrated reasonable for teaching chosen units in Instructional Planning and Administration. The class technique appeared to be a powerful strategy as it contrasted positively and the competency-based methodology. The address strategy was powerful as a gathering technique. Guided self-think about did not contrast well and different techniques. There was a huge connection between confidence and obtaining of competencies. Demeanor towards teaching techniques had a great connection with procurement of competencies. The investigation demonstrated that teacher education projects could be made increasingly compelling through a competency-based methodology.

Korthagen et al (2011) [6] inspected the writing of teacher education both locally and universally keeps on lacking references on the basic examination of teacher educators‟ hidden convictions and manners or to the expert advancement of teacher instructors. They help us to remember the requirement for teacher instructors to look at basically their own learning and advancement on the off chance that we are to accomplish change in teacher education.

Bawa (2014) [7] examined the impact of Micro-Teaching with Planned Integration Training and found that presentation to Micro-Teaching brought about progress of teaching fitness. Presentation to the joining based program after Micro-Teaching did not result in healthy and uniform improvement in teaching skill. Speed and introduction, and support of order were the two segment skills of general teaching capability which were very little influenced by investment in coordination based guidance.

Joshi and Kumar (2013) [8] contemplated the impact of the skill-based approach and choice - making capacity on building up the teaching ability in teacher students. It was discovered that a steady increment in the quantity of skills, time term and understudy number brought about higher teaching fitness when contrasted with every one of the skills being taken together. They saw that student teacher utilizing teaching competency than those trained under the traditional training method. They procured better teaching competencies who were trained for Micro-teaching in genuine classroom than the individuals who were trained in reenacted conditions, and Micro-teaching training created in them uplifting mentality towards was superior to that of private organizations.

Khojastehmehr and Takrimi (2009) [9] inspected the qualities of effective teachers from the points of view of the English teachers. A 50-thing specialist built questionnaire was directed and the data were broke down by means of Principal Component Analysis. The analysis yielded four develops to be specific instructional methodologies, relational abilities, individual attributes and knowledge. The factor loadings for personality characteristics organized by the respondents were adaptability, steadiness, kind and amicable, flawless character, warm and happy, just to all students, ready to convey to uninterested students, and endure the use of first language while encouraging students' support.

Meece et al. (2012) [10] inspected the impact of classroom and school environments on students' academic inspiration and achievement. Extensive proof proposed that elementary and secondary students demonstrated the best inspiration and learning designs when their school settings underlined authority, understanding and improving skills and information. While school environments are centered on showing that high capacity and going after evaluations can build the academic execution of a few students, examine recommends that numerous youngsters experienced decreased inspiration under these conditions.

III. OBJECTIVES OF THE RESEARCH

The objectives of the study are to study Teacher Effectiveness and its Dimensions of Science Faculty Members and Level of effectiveness-Teacher behavior-of science faculty members.

IV. RESEARCH METHODOLOGY

The study was conducted in the Arts and Science College in Haryana: Ashoka College. The data was collected through the questionnaires and then were tabulated and analyzed to measure Level of effectiveness-Teacher behavior-of science faculty members through Percentage Analysis.

V. DATA ANALYSIS

The level of effectiveness of science faculty individuals in colleges partnered to Ashoka University is normal.

Table 5.1: Level of effectiveness of science faculty members in colleges affiliated to Ashoka University

	Low		Average		High	
Description	**Count**	**%**	**Count**	**%**	**Count**	**%**
Effectiveness	51	16.7	235	71.65	34	11.65

Finding: All are Average.

The level of effectiveness and its dimensions of science faculty individuals in colleges' subsidiary to Ashoka University are normal.

Table 5.2: Level of effectiveness and its dimensions of science faculty members in colleges affiliated to Ashoka University

Dimensions	Low		Average		High	
	Count	%	Count	%	Count	%
Teacher behavior	58	19.12	213	68.66	46	12.22
Subject matter	54	16.88	214	66.87	52	16.25
Method of teaching	54	18.13	220	68.75	42	13.13
Teaching aids	55	17.19	230	71.88	35	10.94
Classroom communication	43	13.44	253	79.06	24	7.50
Discipline	60	18.75	225	70.31	35	10.94
Evaluation	61	19.06	226	70.63	33	10.31

Finding: All are Average

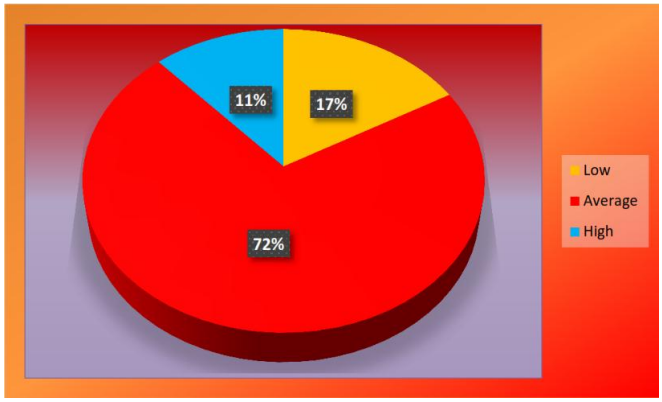


Figure 5.1: Effectiveness of Science Faculty Members

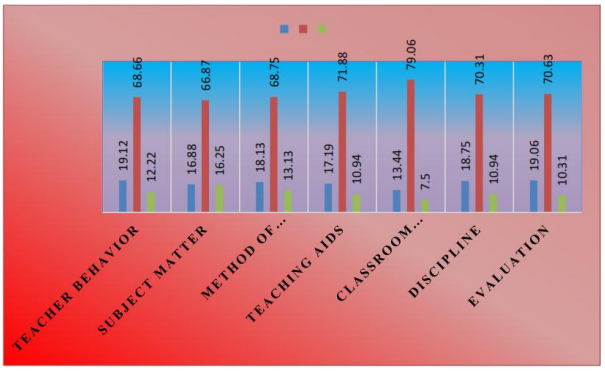


Figure 5.2: Teacher Effectiveness and its Dimensions of Science Faculty Members

Finding: All are Average.

The Level of effectiveness-Teacher behavior-of science faculty individuals in colleges partnered to Ashoka University as far as foundation variables is average.

Table 5.3: Level of effectiveness-Teacher behavior-of science faculty members in colleges affiliated to Ashoka University in terms of background variables.

Sl. No	Background Variables	Categories	Low		Average		High	
			Count	%	Count	%	Count	%
1	Age	Up to 35	13	21.00	42	67.70	7	11.30
		36-50	26	15.70	102	63.30	35	21.10
		51-Retired	19	20.70	69	75.00	4	4.30
2	Sex	Male	45	20.70	144	66.40	28	12.90
		Female	13	12.60	72	69.90	18	17.50
3	Religion	Hindu	38	17.50	151	69.60	28	12.90
		Christian	18	18.80	60	62.50	18	18.80
		Muslim	2	28.60	5	71.40	0	0.00
4	Designation	Lecturer	18	22.50	54	67.50	8	10.00
		S. G. Lecturer	2	6.10	24	72.70	7	27.20
		Sl. G. Lecturer	29	18.50	102	65.00	26	16.60
		Reader	9	18.00	36	72.00	5	10.00
5	Qualification	M.Sc.	8	18.20	32	72.70	4	9.10
		M.Phil	31	15.90	131	67.20	33	16.90
		Ph.D	19	23.50	53	65.40	9	11.10
6	Subject handled	Physics	20	21.30	54	57.40	20	21.30
		Chemistry	18	19.40	65	69.90	10	10.80
		Botany	6	10.70	42	75.00	8	14.30
		Zoology	14	18.20	55	71.40	8	10.40
7	Experience	Upto 10	17	17.90	63	66.30	15	15.80
		11 to 20	26	20.80	79	63.20	20	16.00
		Above 20	15	15.00	74	74.00	11	11.00
8	Income	Upto Rs. 15000	17	19.50	58	66.70	12	13.80
		Rs.15001 to 20000	17	18.90	57	63.30	16	17.80
		Above Rs.20000	24	16.80	101	70.60	18	12.60
9	Locality of the Institution	Rural	25	23.10	70	64.80	13	12.00
		Urban	33	15.60	146	68.90	33	15.60
10	Nature of the Institution	Men	20	19.40	66	64.10	17	16.50
		Women	6	9.20	45	69.20	14	21.50
		Co-education	32	21.10	105	69.10	15	9.90
11	Status of the Institution	Autonomous	0	0.00	29	64.40	16	35.60
		Non-autonomous	58	21.10	187	68.00	30	10.90
12	Type of the Institution	Government	5	41.70	7	58.30	0	0.00
		Aided	52	17.90	195	67.00	44	15.10
		Unaided	1	5.90	14	82.40	2	11.80
13	Courses attended	Orientation	22	17.90	84	68.30	17	13.80
		Refresher	36	18.30	132	67.00	29	14.70
14	Seminars attended	State level	27	22.30	76	62.80	18	14.90
		National level	28	16.10	123	70.70	23	13.20
		Others	3	12.00	17	68.00	5	20.00
15	Workshops attended	State level	35	17.90	138	70.40	23	11.70
		National level	16	19.50	47	57.30	19	23.20
		Others	7	16.70	31	73.80	4	9.50

All the Findings were Normal/Average

VI. RESULTS

The level of effectiveness of science faculty individuals in colleges partnered to Ashoka University is average (71.65%). The level of effectiveness and its dimensions, for example, Teacher behavior (68.66%), Subject issue (66.87%), Method of teaching (68.75%), Teaching

helps (71.88%), Classroom communication (74.06%), Discipline (70.31%), Evaluation (70.63%) of science faculty individuals in colleges partnered to Ashoka University is average. The level of effectiveness-Teacher behavior-of science faculty individuals in colleges associated to Ashoka University regarding foundation variables, for example, age - up to 35 (67.70%); 36 to 50 (63.30%); 51 to resigned (75.00%), sex - male (66.40%); female (69.90%), religion - Hindu (69.60%); Christian (62.50%); Muslim (71.40%), designation - Lecturer (67.50%); S. G. Lecturer (72.70%); Sl. G. Lecturer (65.00%); Reader (72.00%), capability - M.Sc. (72.70%); M.Phil. (67.20%); Ph.D. (65.40%), subject handled - material science (57.40%); chemistry (69.90%); organic science (75.00%); zoology (71.40%), experience - up to 10 (66.30%); 11 to 20 (63.20%); over 20 (74.00%), salary - up to Rs.15000 (66.70%); Rs.15001 to Rs.20000 (63.30%); above Rs.20000 (70.60%), region of the establishment - country (64.80%); urban (68.90%), nature of the organization - men (64.10%); women (69.20%); coeducation (69.10%), status of the foundation - self-sufficient (64.40%); non-autonomous (68.00%), sort of the organization - govt. (58.30%); supported (67.00%); unaided (82.40%), courses visited - introduction (68.30%); boost (67.00%), classes visited - state level (62.80%); national level (70.70%); others (68.00%), workshops visited - state level (70.40%); national level (57.30%); others (73.80%) is observed to be average.

VII. CONCLUSION

The present examination reports that the effectiveness and its dimensions of science faculty individuals in colleges' subsidiary to Ashoka University are just at average level. Likewise the investigation uncovers that most of the science faculty individuals have an average level of effectiveness. This Study uncovers that the teaching effectiveness of self-governing science faculty individuals is more than that of non-self-sufficient science faculty individuals. The obligation cognizance of self-ruling college science faculty individuals might be the explanation behind their high level of effectiveness. To improve their standards and results they may need to put in a great deal of exertion. By steady checking and overseeing the teacher behavior and teaching action to be specific the teaching effectiveness can be improved.

REFERENCES

1. Wenglinsky, H. (2000). How teaching matters: Bringing the classroom back into discussions of teacher quality. Princeton, NJ: The Milken Family Foundation and Educational Testing Service.

2. Agharuwhe, A. Akiri, A. (2013). Effects of teachers' effectiveness on students' academic performance in public secondary schools; delta state-Nigeria. Journal of Educational and Social Research, 3(3), PP. 105-111

3. Al- Huthaifi, K. F. (2000). A suggested perspective of the required competencies to prepare the intermediate school science teachers. Riyadh: King Saud University

4. Abdul Rahim Handan, (2010). Technology Competence Testing among Malesian School Teachersll. European Journal of Social & Sciences – Volume 12

5. Natrajan, S.A., (2014). A Competency Based Programme in Teacher Education Curriculum. Ph.D. Edu., Madras Univ. Madras.

6. Korthagen, F. J., with Kessels, B., Koster, B., Lagerwerf, B. & Wubbels, T. (2011). Linking Practice and Theory: The Pedagogy of Realistic Teacher Education. New Jersey: Lawrence Erlbaum Associates.

7. Bawa, M.S. (2014). Effectiveness of Micro teaching with Planned Integration Training, Following Summative Model of Micro Teaching without Planned Integration Training on the General Teaching Competence of Teacher Trainees. Ph.d. Edu. Delhi. Univ.

8. Joshi, S.M., and Kumar, S. (2013). Effect of Skill-Based Approach and Decision-Making Ability on the Development of Teaching Competence. Independent Study. M.S. Univ. Baroda.

9. Khojastehmehr, R. and Takrimi, A. (2009). Characteristics of Effective Teachers: Perceptions of the English Teachers. Journal of Education and Psychology, 3 (2), pp. 53-66.

10. Meece, Judith L. & Granger, Noelle A. (2012). Self-efficacy's influence on student academic achievement in the medical anatomy curriculum. Anatomical Sciences Education, 5, 5, pp. 249–255.

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