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## Professional development of teachers teaching in CBSE and UP board secondary schools

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### Abstract

Today it has been seen that professional development of teachers is very essential for the schools. Professional development refers to ongoing learning opportunities available to teachers. Parsing the strength and weakness of the vast array of programs that support to invest in teachers knowledge and skills continues to be a challenge. Effective professional development is often seen as vital to school success and teacher satisfaction but it has also been criticized for its cost and for the lack of data on resulting teacher and school improvement that characterizes many efforts. Keeping in view the importance of professional development of teachers, we have framed our title as *“Professional development of teachers teaching in CBSE and UP board secondary schools.* Descriptive survey method was implied to collect the data of the study. 100 secondary teachers from CBSE board school and 100 teachers from UP board have been selected by stratified random sampling technique. These teachers are selected on the basis of gender and type of school from the secondary school of Allahabad city. Professional development scale for teachers consists of 32 questions based on aspects of professional development of teachers. There are seven area of professional development is as follows: 1-student 2- content 3- assessment 4- Instruction 5-learning environment 6- collaboration and communication 7- professional responsibility and growth. In this professional development questionnaire, each statement consists of 3 option-Never, Sometimes and always. Descriptive statistics -mean and percentages have been used for analyzing and interpreting the data and its finding are conducted as: -Difference was observed for all the seven aspects of level of professional development of teachers with respect to school board and gender.

**Keywords:** Professional development, teachers, CBSE and UP board

### Introduction

In general sense education is a form of learning in which knowledge, habits and skills of a group of people are transferred from one generation to the next through teaching, training, research, or simply through auto didacticism. Education is commonly referred to as the process of learning and obtaining knowledge at school, in a formal manner. Education is commonly referred to as the process of learning and obtaining knowledge at school, in a formal manner. Teaching is a profession that teaches all other professions. Good teaching is one of the best ways to create and develop critical thinking among citizens and workers. Enthusiastic, intelligent and well educated teachers inspire and prepare students for the technological world. This is changing time in education systems around the world. With the start of the new millennium many societies are engaging in serious and promising educational reforms. One of the key elements in most of these reforms is the professional development of teachers, societies are finally acknowledging that teachers are not only one of the variables that need to be changed in order to improve their education systems, but they are also the most significant agents in these reforms. This double role of teachers in educational reforms- being both subjects and objects of change-makes the field of teacher professional development a growing and challenging area and one that has received major attention during the past few years. In my opinion professional development of teachers teaching in CBSE and UP board is very essential. To bring qualitative improvement in schools, professional development for teachers is very essential. Various training programs are playing vital role to bring professional development of teachers. For e.g. According to NCTE –the B.Ed. M.Ed. and diet programmes is running now- a- days as pre-service training programs. These programmes leading professional development for teachers. After getting the job, government providing many in-service training programmes for teachers for their

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Professional development. For e.g.-workshops, seminars, orientations. In this way appointed teachers are getting professional growth through various training programmes.

### Review of related Literature

Guskey (2003) <sup>[3]</sup>- recently revisited the area of evaluation of effectiveness in professional development. He examined 13 lists of characteristics of effective professional development, drawn from organizations including the American Federation of Teachers, Educational Testing Service, National Staff Development Council, National Partnership for Excellence and Accountability in Teaching and the Association for Supervision and Curriculum Development. He discovered a wide variance both in the listed characteristics of “effectiveness” and the consistency of the research claims upon which they are based. Many lists cited increased content knowledge as a key measure of successful professional learning but this has not been fully proven in all subject areas. Also, measures involving indicators such as sufficient time and resources are inconclusive, although there is some evidence that professional development “time must be well organized, carefully structured and purposefully directed”.

Fullan, Hill & Crevola (2006) <sup>[1]</sup> claim that professional learning that focuses on contextually-based, personalized, data-driven instruction is one of the three central components of *Break through* thinking that will be critical to successful educational reform and that will noticeably improve and sustain learning for students and teachers alike. In their view, teachers must be learning in their classrooms every day.

Whitehurst, Arnold *et al.* 1994 <sup>[7]</sup>; Donovan, Bransford, and Pellegrino 1999; Raikes *et al.* (2006). <sup>[2]</sup> studied on the intensity and duration of the professional development which is matched to the content being conveyed and find that the appropriateness of the length of time spent in professional development activities depends on the goals of the activities themselves. A one-time workshop is not effective if the goal is to convey theory and practice to improve multiple aspects of early language and literacy development, such as oral language, phonological awareness, alphabetic principle, and awareness of print. It may, however, be appropriate for preparation on a single specific activity or strategy.

(Vu, Jeon, and Howes 2008) <sup>[3]</sup>-concluded that the effectiveness of professional development approaches will differ according to features of organizational context, articulated standards for practice and with the extent of ongoing monitoring and supervision

### Need and justification of the study

Today it has been seen that professional development of teachers is very essential for the schools. Professional development refers to ongoing learning opportunities available to teachers. Parsing the strength and weakness of the vast array of programs that support to invest in teachers knowledge and skills continues to be a challenge. Effective professional development is often seen as vital to school success and teacher satisfaction but it has also been criticized for its cost and for the lack of data on resulting teacher and school improvement that characterizes many efforts. Studies reviewed provided ample evidence about the teachers’ personality, values and attitude towards teaching profession. After going through all the mentioned related literature, it is clear that most of the studies were conducted on effective professional development in other countries. No study was conducted on professional development of teachers teaching

in schools. The present study is quite different from the studies reviewed in its tools, samples and variables used.

Thus it is clear from the above description that the present study is quite different from the other studies that it may probe into the causes of difference among the professional development of teachers teaching in CBSE and UP board schools. This study will show clear picture of professional development of teachers teaching in schools.

### Objectives of the study

The study will be conducted with following main objectives:

1. To find out the professional development of teachers teaching in CBSE board schools.
2. To find out the professional development of teachers teaching in UP board schools.
3. To compare the professional development of teacher teaching in CBSE and UP board schools.

### Hypothesis of the study

1. There is no significant difference in professional development of male and female teachers teaching in CBSE board schools
2. There is no significant difference in professional development of male and female teachers teaching in UP board schools.
3. There is no significant difference in professional development of teacher teaching in CBSE and UP board schools.

### Operational definition of the terms used:

**1-Professional Development:** Professional development is a continuous process that includes multiple steps: Planning, implementation, reflection, evaluation and revision. The result of this process is a series of activities or programs that has been systematically planned and designed to form an integrated whole. Professional development may be defined as “The sum total of formal and informal learning experiences throughout one’s career from pre-service teacher education to retirement”. In this study professional development is related to following seven aspects which are given below:

1-students 2- content 3- assessment 4-instruction 5- learning environment 6-collaboration and communication 7-professional responsibility and growth

**2-CBSE School-** CBSE schools are the schools are not affiliated with any state board of education other than CBSE. A good number of schools especially in north India, are affiliated with CBSE. The school board is famous for developing and implementing key educational policies in India.

**3- UP Board School-** The board was set up in the year 1921 at Allahabad by an act of provinces legislative council. It conducted its first examination in 1923. This board is one in India which from the very start had adopted 10+2 system of examination. All the schools affiliated to UP board are known as UP board school.

**Research method:** The present study belongs to the category descriptive field survey research.

**Sample and sampling procedure:** It can be revealed that 100 secondary teachers from CBSE board school and 100

teachers from UP board have been selected by stratified random sampling technique.

**Tools used**

**The following tool was used to collect data in the present study**

**Professional development scale for teachers:**

This test consists of 32 questions based on aspects of professional development of teachers. There are seven area of professional development is as follows: 1-student 2-content 3- assessment 4- Instruction 5-learning environment 6- collaboration and communication 7- professional responsibility and growth. In this professional development questionnaire, each statement consists of 3 option-Never, Sometimes and always.

**Data analysis and result discussion**

**Objective 1:** To find out the professional development of teachers teaching in CBSE board schools.

**Hypothesis 1:** There will be no significant difference in professional development of male and female teachers teaching in CBSE board schools.

The first objective of the study was to find out the professional development of teachers teaching in CBSE board schools, descriptive analysis (frequency count & percentage (%)) are computed and the results of analysis are shown in the table 1.

**Table 1:** showing the professional development of teachers teaching in CBSE board schools

A.	Student	Gender	Never	sometime	Always
		(In %)			
1	I understand how students learn and I know the developmental characteristics' of different age groups of students	Male	0	46.67	53.33
		Female	5	45	50
2	I use my knowledge of what students know and are able to do meet the needs of all of my students	Male	0	16.67	83.33
		Female	0	40	60
3	I expect that all students will achieve to their full potential	Male	0	33.33	66.67
		Female	0	40	60
4	I demonstrate respect for my students' diverse cultures, language skills and experiences	Male	0	33.33	66.67
		Female		60	40
5	I assist in the appropriate identification, instruction and intervention for gifted students, students with disabilities and at-risk students	Male	0	30	70
		Female	0	40	60
B.	Content	Gender	Never	sometime	Always
1	I use my knowledge of content-specific concepts, assumptions and skills to plan effective instruction.	Male	0	33.33	66.67
		Female		45	55
2	I use my knowledge of content-specific instructional strategies to effectively teach the central concepts and skills of my discipline	Male	0	33.33	66.67
		Female	0	55	45
3	I connect my discipline with other content areas to plan and deliver effective instruction	Male	0	40	60
		Female	0	40	60
4	I connect content to relevant life experiences and career opportunities	Male	0	30	70
		Female	0	45	55
C.	Assessment	Gender	Never	sometime	Always
1	I understand varied type of assessments, their purposes and the data they generate	Male	0	16.67	83.33
		Female	0	40	60
2	I select, develop and use a variety of diagnostic, formative and summative assessments.	Male	0	7(23.33%)	76.67
		Female	0	30	70
3	I analyze data to monitor student's progress and learning, and to plan, differentiate and modify instruction	Male		36.67	63.33
		Female		30	70
4	I collaborate and communicate student progress with students, parents and colleagues.	Male		40	60
		Female		15	85
5	I involve learners in self-assessment and goal setting to address gaps between performance and potential.	Male		23.33	76.67
		Female		35	65
D.	Instruction	Gender	Never	sometime	Always
1	I use information about students learning and performance to plan and deliver instruction designed to close the achievement gap	Male		50	50
		Female		25	75
2	I communicate clear learning goals and link learning activities to those goals	Male		26.67	73.33
		Female		35	65
3	I apply my knowledge of how students think and learn to my planning and instruction	Male		26.67	73.33
		Female		40	60
4	I differentiate instruction to meet the needs of all students, including gifted students. students with disabilities and at-risk students	Male		26.67	73.33
		Female		45	55
5	I create and select activities that are designed to help students become independent learners and complex problem-solvers	Male		46.67	53.33
		Female		55	45
6	I use resources effectively including technology, to enhance student learning	Male		40	60
		Female		150	50
E.	Learning Environment				
1	I treat all students fairly and i have established a classroom environment that is respectful, supportive and caring	Male		50	50
		Female		45	55
2	I have created a classroom environment that is physically and emotionally safe.	Male		30	70
		Female		40	60

3	I motivate my students to work productively and take responsibility for their own learning	Male		13.33	86.67
		Female		40	60
4	I create learning situations in which students work independently, collaboratively and or as a whole class.	Male		26.67	73.33
		Female		30	70
5	I maintain an environment that is conducive to learning for all students	Male		6.67	93.33
		Female		25	75
<b>F. Collaboration and Communication</b>		<b>Gender</b>	<b>Never</b>	<b>sometime</b>	<b>Always</b>
1	I communicate clearly and effectively	Male		56.67	43.33
		Female		30	70
2	I share responsibility with parents and caregivers to support student learning. Emotional and Physical development and mental health	Male		40	60
		Female		45	55
3	I collaborate effectively with other teachers, administrators and school and district staff	Male		33.33	66.67
		Female		55	45
4	I collaborate effectively with the local community and community agencies, when appropriate to promote student learning	Male		60	40
		Female		75	25
<b>G. Professional responsibility and growth</b>		<b>Gender</b>	<b>Never</b>	<b>sometime</b>	<b>Always</b>
1	I understand uphold and follow professional ethics, policies and legal codes of professional conduct.	Male		30	70
		Female		50	50
2	I take responsibility for engaging in continuous, purposeful professional development	Male		20	80
		Female		25	75
3	I seek opportunities to impact the quality of my teaching, make school improvements and increase student achievement	Male		36.67	63.33
		Female		65	35

**Result of Professional development of CBSE board teachers:-**

**A. Students understanding and development -**

When CBSE board teachers were asked about information related to student understanding and development. The analysis of data shows that 68% male teachers answered always 38% answered sometime. When same question is asked to female teachers of CBSE board, 1% answered Never, 45% answered sometime and 54% answered always.

**B. Content**

When CBSE board teachers were asked about information related to content understanding and development. The analysis of data shows that 65.83% male teachers answered always, 34.16% answered sometime. When same question is asked to female teachers of CBSE board, 46.25% answered sometime and 53.75% answered always.

**C. Assessment**

When CBSE board teachers were asked about information related to Assessment understanding and development. The analysis of data shows that 72% male teachers answered always, 28% answered sometime. When same question is asked to female teachers of CBSE board, 30% answered sometime and 70% answered always.

**D. Instruction**

When CBSE board teachers were asked about information related to instruction understanding and development. The analysis of data shows that 63.89% male teachers answered always, 36.11% answered sometime. When same question is asked to female teachers of CBSE board, 41.67% answered sometime and 58.33% answered always.

**E. Learning Environment**

When CBSE board teachers were asked about information related to learning environment understanding and

development. The analysis of data shows that 74.67% male teachers answered always, 25.33% answered sometime. When same question is asked to female teachers of CBSE board, 36% answered sometime and 64% answered always.

**F. Collaboration and Communication**

When CBSE board teachers were asked about information related to collaboration and communication understanding and development. The analysis of data shows that 52.50% male teachers answered always, 47.50% answered sometime. When same question is asked to female teachers of CBSE board, 51.25% answered sometime and 48.75% answered always.

**G. Professional responsibility and growth**

When CBSE board teachers were asked about information related to professional responsibility and growth understanding. The analysis of data shows that 71.11% male teachers answered always, 28.89% answered sometime. When same question is asked to female teachers of CBSE board, 46.67% answered sometime and 53.33% answered always.

On the basis of above description and analysis of data, it is clear that there is significant difference in various aspects of professional development male and female teachers of CBSE board teachers.

**Objective 2:** To find out the professional development of teachers teaching in UP board schools.

**Hypothesis 2:** There will be no significant difference in professional development of male and female teachers teaching in UP board schools.

The second objective of the study was to find out the professional development of teachers teaching in UP board schools, descriptive analysis (frequency count & percentage (%)) are computed and the results of analysis are shown in the table 2.

**Table 2:** showing the professional development of teachers teaching in up board schools

A	Student		Never	sometime	Always
1	मैं यह समझता हूँ कि विद्यार्थी किस प्रकार से सीखते हैं तथा मैं छात्रों के विभिन्न आयु समूह के विकास, विशेषताओं को जानता हूँ।	Male(33)	3.03	57.58	39.39
		Female(17)		70.58	29.41
2	मैं अपने ज्ञान का उपयोग करता हूँ कि छात्रों को क्या पता है। और अपने छात्रों में से सभी की जरूरतों को पूरा करने में सक्षम हूँ।	Male		63.64	36.36
		Female		47.06	52.94
3	मुझे उम्मीद है कि सभी छात्र अपनी पूरी क्षमता को प्राप्त करेंगे।	Male		39.39	60.61
		Female		58.82	41.18
4	मैं अपने समस्त विद्यार्थियों के विभिन्न संस्कृतियों, भाषा, कौशलों तथा अनुभवों के लिए सम्मान प्रदर्शित करता हूँ।	Male		33.33	66.67
		Female		41.18	58.82
5	मैं अपने प्रतिभाशाली विकलांग एवं कमजोर छात्रों को अलग-अलग उपागम का प्रयोग करके सहायता प्राप्त करता हूँ।	Male		45.45	54.55
		Female		52.94	47.06
B	<b>सामग्री</b>	Gender	Never	Sometime	Always
1	मैं अपने विषय ज्ञान विशिष्ट संप्रत्ययों, अवधारणाओं एवं कौशल के ज्ञान का उपयोग प्रभावशाली शिक्षण योजना बनाने के लिए करता हूँ।	Male		51.52	48.48
		Female		41.18	58.82
2	मैं अपने विषय ज्ञान एवं विशिष्ट अनुदेशनात्मक युक्तियों का प्रयोग, अपने विषय के मुख्य संप्रत्ययों एवं कौशल के शिक्षण हेतु करता हूँ।	Male		45.45	54.55
		Female		47.06	52.94
3	मैं अपने विषय वस्तु को दूसरे क्षेत्र के विषय से जोड़कर एक प्रभावशाली अनुदेशन तैयार एवं प्रस्तुत करता हूँ।	Male	3.03	48.48	48.48
		Female		70.59	29.41
4	मैं अपने विषय वस्तु को जीवन के मुख्य अनुभवों और कैरियर के अवसरों से जोड़ता हूँ।	Male		51.52	48.48
		Female		41.18	58.82
C	<b>मूल्यांकन</b>				
1	मैं विभिन्न प्रकार के मूल्यांकन अपने उद्देश्यों और आंकड़ों को समझता हूँ।	Male		57.58	42.42
		Female		58.82	41.18
2	मैं विभिन्न प्रकार के निदानात्मक, रचनात्मक और योगात्मक मूल्यांकन का चयन, विकास और प्रयोग करता हूँ।	Male		42.42	57.58
		Female		52.94	47.06
3	मैं विद्यार्थियों के सीखने से सम्बन्धित प्रगति एवं विकास का विश्लेषण करता हूँ। तथा उसी के अनुसार अपनी योजना एवं अनुदेशन को संशोधित करता हूँ।	Male		30.30	69.70
		Female		47.06	52.94
4	मैं अपने विद्यार्थियों की प्रगति आस्था को उनके अभिभावकों सहयोगियों तथा विद्यार्थियों को प्रेषित करता हूँ।	Male		36.36	63.64
		Female		29.41	70.59
5	मैं शिक्षार्थियों को क्षमता अवलोकन तथा निष्पादन के बीच अंतराल को पूरा करने के लिए अन्तर्वर्ती कर्मों से संलग्न रहता हूँ।	Male		42.42	57.58
		Female		76.47	23.53
D	<b>अनुदेशन</b>		Never	sometime	Always
1	मैं छात्रों के सीखने और प्रदर्शन के लिए योजना और उपलब्धि अंतराल को कम करने के लिए डिजाइन अनुदेशन देने के बारे में जानकारी का उपयोग करता हूँ।	Male		63.64	36.36
		Female		76.47	23.53
2	मैं अपने अधिगम उद्देश्यों को स्पष्ट अधिगम क्रियाओं से जोड़कर प्रेषित करता हूँ।	Male		45.45	54.55
		Female		35.29	64.71
3	मैं अपनी योजना एवं अनुदेशन में विद्यार्थी कैसे सीखते हैं, इस विचार को शामिल करता हूँ।	Male	3.04	36.36	60.60
		Female		58.82	41.18
4	मैं अपने अनुदेशन को प्रतिभाशाली विकलांग एवं कम जोखिम वाले विद्यार्थियों की जरूरतों को पूरा करने के लिए अलग-अलग रखता हूँ।	Male		48.48	51.52
		Female		52.94	47.06
5	मैं विभिन्न क्रियाओं को चुनना और निर्माण करता हूँ। जिससे कि छात्र स्वतंत्र सीखने वाले और जटिल समस्याओं का समाधान करने वाले हो सकें।	Male		42.42	57.58
		Female		52.94	47.06
6	मैं विभिन्न साधनों और प्रेषण तकनीकों का इस्तेमाल विद्यार्थियों के अधिगम एवं विकसित एवं बढ़ाने के लिए करता हूँ।	Male		48.48	51.52
		Female		47.06	52.94
E	<b>अधिगम वातावरण</b>	Gender	Never	sometime	Always
1	मैं सभी विद्यार्थियों के साथ निष्पक्ष व्यवहार करता हूँ और मैं सम्मानपूर्ण और सौहार्दपूर्ण वातावरण स्थापित करता हूँ।	Male		45.45	54.55
		Female		47.18	58.82
2	मैं ऐसा वातावरण बनाता हूँ जो शारीरिक एवं भवात्मक रूप से सुरक्षित हो।	Male		42.42	57.58
		Female		35.29	64.71
3	मैं अपने छात्रों को उत्पादक कार्य करने के लिए और खुद सीखने के जिम्मेदारी लेने के लिए प्रेषित करता हूँ।	Male		39.39	60.61
		Female		52.94	41.18
4	मैं ऐसा अधिगम परिस्थिति उत्पन्न करता हूँ जिसमें विद्यार्थी एक स्वतंत्र कक्षा इकाई के रूप में सहयोगपूर्ण स्वतंत्र एवं सहभागिता के साथ कार्य करता हूँ।	Male		48.48	51.52
		Female		47.06	52.94
5	मैं ऐसा वातावरण बनाता हूँ जो सभी छात्रों को सीखने के लिए अनुकूल हो।	Male		27.27	72.73
		Female		35.29	64.71
F	<b>सहयोग एवं संचार</b>	Gender	Never	sometime	Always
1	मैं स्पष्ट रूप से और प्रभावी ढंग से संप्रेषण करता हूँ।	Male		36.36	63.64
		Female		52.94	47.06
2	मैं अपने माता-पिता और जिम्मेदारी और साक्षात् करने वाले लोगों से विद्यार्थियों के अधिगम भावात्मक मानसिक एवं शारीरिक विकास से सम्बन्धित सूचनाओं को साझा करता हूँ।	Male		54.55	45.45
		Female		47.06	52.94
3	मैं अन्य शिक्षकों प्रशासकों स्कूल और जिला स्टाफ को प्रभावी रूप से सहयोग करता हूँ।	Male	6.06	45.45	48.48
		Female		52.94	47.04
4	मैं स्थानीय समुदाय और समुदाय एजेंसियों को प्रभावी ढंग से सहयोग करता हूँ। जो उपयुक्त समय पर विद्यार्थियों के अधिगम को बढ़ावा दे।	Male	9.09	39.39	51.52
		Female	11.76	23.52	64.71
G	<b>व्यावसायिक जिम्मेदारी और विकास</b>	Gender	Never	sometime	Always
1	मैं व्यावसायिक नैतिकता नीतियों तथा कानून तथ्यों का पालन करता हूँ।	Male	3.03	60.61	36.36
		Female	11.76	52.94	35.29
2	मैं निरंतर उद्देश्यपूर्ण व्यावसायिक विकास संलग्न रहता हूँ तथा इसकी जिम्मेदारी लेता हूँ।	Male	3.03	45.45	51.52
		Female	5.88	58.82	35.29
3	मैं अपनी शिक्षा की गुणवत्ता, विद्यालय में सुधार तथा छात्रों की उपलब्धि में वृद्धि के लिए हमेशा अवसरों का तलाश करता रहता हूँ।	Male		33.33	66.67
		Female		41.18	58.82

**Result and conclusion on Professional development of UP board teachers**

**A. Students understanding and development**

When UP board teachers were asked about information related to student understanding and development. The analysis of data shows that 51.52% male teachers answered always, 47.88% answered sometime. When same question is asked to female teachers of UP board, 54.12% answered sometime and 45.88% answered always.

**B. Content**

When UP board teachers were asked about information related to content understanding and development. The analysis of data shows that 50% male teachers answered always, 50% answered sometime. When same question is asked to female teachers of UP board, 50% answered sometime and 50% answered always.

**C. Assessment**

When UP board teachers were asked about information related to Assessment understanding and development. The analysis of data shows that 58.18% male teachers answered always, 41.82% answered sometime. When same question is asked to female teachers of UP board, 52.94% answered sometime and 47.06% answered always.

**D. Instruction**

When UP board teachers were asked about information related to instruction understanding and development. The analysis of data shows that 52.02% male teachers answered always, 47.47% answered sometime. When same question is asked to female teachers of UP board, 53.92% answered sometime and 46.08% answered always.

**E. Learning Environment**

When UP board teachers were asked about information related to learning environment understanding and development. The analysis of data shows that 59.40% male

teachers answered always, 40.60% answered sometime. When same question is asked to female teachers of UP board, 43.55% answered sometime and 40.60% answered always.

**F. Collaboration and Communication**

When UP board teachers were asked about information related to collaboration and communication understanding and development. The analysis of data shows that 52.27% male teachers answered always, 43.94% answered sometime and 3.79% answered never. When same question is asked to female teachers of UP board, 2.94% answered never 44.12% answered sometime and 52.94% answered always.

**G. Professional responsibility and growth**

When UP board teachers were asked about information related to professional responsibility and growth understanding. The analysis of data shows that 51.52% male teachers answered always, 46.46% answered sometime and 2.02% answered never. When same question is asked to female teachers of UP board, 5.88% answered never, 50.98% answered sometime and 43.13% answered always.

On the basis of above description and analysis of data, it is clear that there is significant difference in various components of male and female teachers of UP board teachers.

**Objective 3:** To compare the professional development of teachers teaching in CBSE and UP board schools.

**Hypothesis 3:** There will be no significant difference in professional development of teacher teaching in CBSE and UP board schools.

The third objective of the study was to compare the professional development of teachers teaching in CBSE and UP board schools, descriptive analysis (frequency count & percentage (%)) are computed and the results of analysis are shown in the table 3.

**Table 3:** showing Comparison of Professional development of CBSE Board and UP Board teachers

S.No.	Student	Board	Never	sometime	Always
1	I understand how students learn and I know the developmental characteristics' of different age groups of students	CBSE	2	46	52
		UP	2	62	36
2	I use my knowledge of what students know and are able to do meet the needs of all of my students	CBSE board		26	74
		UP board		58	42
3	I expect that all students will achieve to their full potential	CBSE board		36	64
		UP board		46	54
4	I demonstrate respect for my students 'diverse cultures, language skills and experiences	CBSE board		44	56
		UP board		36	64
5	I assist in the appropriate identification, instruction and intervention for gifted students, students with disabilities and at-risk students	CBSE board		34	66
		UP board		48	52
	<b>content</b>	<b>Gender</b>	<b>Never</b>	<b>sometime</b>	<b>Always</b>
1	I use my knowledge of content-specific concepts, assumptions and skills to plan effective instruction.	CBSE board		38	62
		UP board		48	52
2	I use my knowledge of content-specific instructional strategies to effectively teach the central concepts and skills of my discipline	CBSE board		42	58
		UP board		46	54
3	I connect my discipline with other content areas to plan and deliver effective instruction	CBSE board		40	60
		UP board	2	56	42
4	I connect content to relevant life experiences and career opportunities	CBSE board		36	64
		UP board		48	52
	<b>Assessment</b>	<b>Gender</b>	<b>Never</b>	<b>sometime</b>	<b>Always</b>
1	I understand varied type of assessments, their purposes and the data they generate	CBSE board		26	74
		UP board		58	42
2	I select, develop and use a variety of diagnostic, formative and summative assessments.	CBSE board		34	66
		UPboard		46	54
3	I analyze data to monitor student's progress and learning, and to	CBSE board		34	66

	plan, differentiate and modify instruction	UP board		36	64
4	I collaborate and communicate student progress with students, parents and colleagues.	CBSE board		30	70
		UP board		34	66
5	I involve learners in self-assessment and goal setting to address gaps between performance and potential.	CBSE board		28	72
		UP board		54	46
	<b>instruction</b>		<b>Never</b>	<b>Sometime</b>	<b>Always</b>
1	I use information about students learning and performance to plan and deliver instruction designed to close the achievement gap	CBSE board		40	60
		UP board		68	32
2	I communicate clear learning goals and link learning activities to those goals	CBSE board		30	70
		UP board		42	58
3	I apply my knowledge of how students think and learn to my planning and instruction	CBSE board		32	68
		UP board	2	44	54
4	I differentiate instruction to meet the needs of all students, including gifted students, students with disabilities and at-risk students	CBSE board		34	66
		UP board		50	50
5	I create and select activities that are designed to help students become independent learners and complex problem-solvers	CBSE board		50	50
		UP board		46	54
6	I use resources effectively including technology, to enhance student learning	CBSE board		44	56
		UP board		48	52
	<b>Learning Environment</b>		<b>Never</b>	<b>Sometime</b>	<b>Always</b>
1	I treat all students fairly and i have established a classroom environment that is respectful, supportive and caring	CBSE board		48	52
		UP board		44	56
2	I have created a classroom environment that is physically and emotionally safe.	CBSE board		34	66
		UP board		40	60
3	I motivate my students to work productively and take responsibility for their own learning	CBSE board		24	76
		UP board		44	56
4	I create learning situations in which students work independently, collaboratively and or as a whole class.	CBSE board		28	72
		UP board		48	42
5	I maintain an environment that is conducive to learning for all students	CBSE board		14	86
		UP board		30	70
	<b>Collaboration and Communication</b>	<b>Gender</b>	<b>Never</b>	<b>sometime</b>	<b>Always</b>
1	I communicate clearly and effectively	CBSE board		46	54
		UP board		42	58
2	I share responsibility with parents and caregivers to support student learning, Emotional and Physical development and mental health	CBSE board		42	58
		UP board		52	48
3	I collaborate effectively with other teachers, administrators and school and district staff	CBSE board		42	58
		UP board	4	48	48
4	I collaborate effectively with the local community and community agencies, when appropriate to promote student learning	CBSE board		66	34
		UP board	10	34	56
	<b>Professional responsibility and growth</b>				
1	I understand uphold and follow professional ethics, policies and legal codes of professional conduct.	CBSE board		38	62
		UP board	6	58	36
2	I take responsibility for engaging in continuous, purposeful professional development	CBSE board		22	78
		UP board	4	50	46
3	I seek opportunities to impact the quality of my teaching, make school improvements and increase student achievement	CBSE board		48	52
		UP board		36	64

### Comparison of professional development of CBSE and UP board teachers

On the basis of description and analysis from the table 1, 2 and 3 it can be concluded that difference was observed for all the seven aspects of professional development. There is a direction of difference is in favour of CBSE board teachers. Therefore it is clear that there is significant difference in the level of professional development of CBSE and UP board teachers.

### Educational implications of the study

1. This study improves the learning for teachers and students.
2. Learning during the school year makes it easier for teachers to apply what they learn immediately within their work places so that students benefit immediately.
3. If administrators become better leaders and teachers become more effective and apply what they learn so that students achieve at higher levels, professional development is worth the cost.

4. Professional development provides ongoing opportunities for educators to continue to improve their knowledge and skills so they can help students achieve.

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