Review of Best Teaching Methodologies in Rural Areas

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Abstract- This paper extracts and broadens rural teachers' most effective proclaimed motivating strategies. From the data generated by 2 years of mixed method research in rural college, these strategies appeared as among the most victorious. Selection of best practices was formed on a synthesis of what both teachers and students reported as making the greatest positive impact on their colleges' related motivation. Teaching strategies are illustrated by multiple exhaustive examples from teachers' interviews. Strategies are i) start with your classroom set up, ii) make digital citizenship a priority, iii) teach mini-lessons before using devices, iv) use the power of choice, v) remember that sharing is caring, vi) conduct teacher check-ins etc. The teaching methodology is surveyed through the college. The surveyed data is plotted using histogram graph method using MATLAB platform. Histogram is a graphical display of data using bars of different heights. It is similar to a bar chart, but a histogram group's number into ranges. The height of each bar shows how many fall into each range.

Keywords: MATLAB, histogram, rural colleges, teaching strategies, motivation.

I. INTRODUCTION

Teachers often enter the profession because of their genuine desire to witness and support the physical, emotional and intellectual growth of their students. Yet a teacher's performance is firmed largely by student achievements. You have to, because motivation influences both developmental and performance outcomes educators have a vested interest in their students' motivation. However, understanding the motivation is not an easy task. While education in rural areas faces an array of provocation, there are solutions for students, they are

Not all colleges are the same -- different institution face different problems. This is especially true when looking at rural colleges. Students in rural schools are far less likely to attend rural college, for example, while services and extracurricular activities are generally far less available than in urban areas. This neglect even enhances into basic research, with surprisingly few studies being aimed at rural teaching -- despite education being a field with constant studies on every conceivable subject. There is enough data, though, to discover some of the challenges facing rural education.

I.I. TEACHER HIRING

In many urban areas, there is a glut of talented teachers but not enough jobs available to employ them. In rural areas, though, it can be terrifically tricky to attract great teachers. Indeed hiring in general is tougher in rural areas, for fields extending far beyond education. Rural life isn't for everyone, and a life that's simpler can appear to some people like a life that's "less than". Many services such as health care can be harder to obtain, there may be fewer cultural attractions collated to big cities -- the list of reasons why teachers may be dissuaded from applying for educational jobs in rural areas can be long.

In reality, rural life and rural teaching offer a great many benefits one can never find in big cities, including an environment that's cleaner (and safer), cheaper real estate plus a strong sense of community. Perceptions can be hard to fight, though, which can leave rural colleges struggling to find staff. The usual approach is to offer higher pay or better side benefits, but this can often be difficult to afford.

I.II. SPOTTY INTERNET ACCESS

People in big cities take broadband Internet access for approved. Not only is it fairly easy to sign up for fast access, people in cities are frequently spoiled for choice. However, is still experiencing a digital divide, with, by some measures, more than a third of rural residents lacking access to broadband Internet.

This can drastically affect education in rural areas. Not only does it make it hard for many teachers to employ digital resources such as YouTube in the classroom, but employing learning management systems (LMSs) such as Moodle can sometimes be impossible. Even accepting digital submissions of homework and coursework can be hard. Also contributed unavailable by slow Internet access are the vast opportunities for digital learning, eBooks, and the ability to collaborate online. Even basic software like Google Docs

can be a struggle for rural schools to take improvement of. Efforts are still being made to expand access to broadband in rural areas, but progress is slow.

I.III. POVERTY

Nowhere is free of poverty, but rates of unemployment, malnutrition and poverty are markedly higher in rural areas than in urban areas. Unlike cities, though, where high population density tends to make poverty more visible, it can be much harder to see in rural areas, which makes it harder to cope with.

Poverty is proven to affect educational outcomes, and constantly leads to surged absenteeism (or early drop-outs). Schools recurrently have programs to help, for instance providing meals to children in need, but given the large geographic areas in many rural school districts, it's not unusual for teachers to not know how their students are living.

I.IV.TEACHERS NEED TO BE ENTREPRENEURIAL

A little-known fact about rural areas in America: they have a much higher rate of entrepreneurialism. Perhaps the result of a different mindset or the difficulty in obtaining services, many people in rural areas are just used to getting things done themselves. This extends to education as well. A teacher with willingness to jump in and get things done will do far better in rural areas than a teacher who is used to being hemmed-in by a bureaucracy.

II. AIMS AND OBJECTIVES

The aims of this project were

1) To select college degree, fully certified, young teachers, and through an in-service program train them for careers in rural education in remote and economically disadvantaged localities.
2) To promote and develop adequate programs of supervision.
3) To introduce new teaching methodologies in the teaching field for rural colleges.
4) To stimulate best teaching methodologies for rural colleges.
5) To develop student critical thinking, identifying student learning disabilities and overcome social barriers.

Some of the most important objectives of teacher education are as follows:

1. **Imparting an adequate knowledge of the subject-matter:**
The idea of teacher education is to develop a good command of the subject matter of the assignment given to him in the colleges.

2. **Equipping the prospective teachers with necessary pedagogic skills:**
The main objective of teacher education is to enlarge a skill to stimulate experience in the taught, under an artificially created environment, less with material resources and more by the creation of an emotional atmosphere. The teacher should develop a capacity to do, observe, infer and to generalize.

3. **Enabling the teacher to acquire understanding of child psychology:**
The objective is to understand the child psychology so that the teacher is able to realize the difficulties experienced by children so as to bring about new modes and methods of concluding the goals in consonance with the reactions of the children.

4. **Developing proper attitudes towards teaching:**
One of the major targets of teacher education is to develop proper attitudes towards teaching as a result of which she/he will be able to maximize the achievements from both the material and human resources. There is also enlargement of a proper perception of the inconvenience of universal enrolment, regular attendance, and year-to-year promotion.

5. **Developing self-confidence in the teachers:**
The plans of teacher education are development of the ability to take care of him in terms of:
(a) Adjustment with the physical conditions,
(b) Healthy modification with the social environment
(c) Alteration with himself to derive emotional satisfaction with his life.

6. **Enabling teachers to make proper use of instructional facilities:**
The purpose of teacher education is to develop the capacity to extend the resources of the school by means of improvisation of instructional facilities.

7. **Enabling teachers to understand the significance of individual differences of child and to take suitable steps for their optimum development:**
The intention of teacher education is to know the causes of individual differences as a result of which he will be able to develop the ability to be a child with children, an adult with the adults, a dependable citizen among the community.

8. **Development of the ability to give direct satisfaction of parents from the achievement of children in terms of:**
(a) Proper habits of taking care of the body,
(b) Real attitudes reflected in the behaviour of the children at home, in the school, in the streets, at the farms and fields etc.
(c) Progress in the class.

The duties of the teacher are very much relevant in nursery, primary, middle, secondary, higher secondary schools. Hence the scope of teacher education is very vast. The duties of the teacher in different stages of education hang on the foundational general education of the teacher. Emphasis is to be on the practical aspects rather than theory.

III. TEACHING METHODOLOGY

A teaching method incorporates the principles and methods used by teachers to enable student learning. These strategies are determined partly on subjects matter to be taught and partly by the nature of the learner.
There are several teaching methodologies which integrates technology into the classroom an effective teaching. They are

Run a virtual field trip: Field trips are informal learning experiences that get student out into the world, exploring the world and students' interests. Field trips to museums, parks, historical sites, and more show students that learning happens outside the classroom, too.

Use videos for mini lessons: Using videos in the classroom is a very good concept. Not only does this offer a teacher with a wide range of extraordinary benefits but it is fun experiment for kids as well and they will certainly appreciate the entire experience to begin with. It is all about having the right approach and attention to detail here something that every teacher must focus on if he/she wants to deliver the best results.

Co-ordinate live video: The video study approach provides many unique advantages for understanding classroom activity. Video study is also an intrusive methodology, and some argue that it may be even more intrusive that live observation, especially when it is done in a community wherever video tapping is not common.

Add multimedia elements to presentations: The concept of multimedia took on a new meaning and plays as a good tool in educational technology. Furthermore the satellite, computers, audio, and video converged to create new media with enormous potential combined with the advances in hardware and software, these technologies were able to provide enhanced learning facility and with attention to specific needs of individual users.

Use mind maps for class brainstorms: Mind mapping is a visual form of note taking that offers an overview of a topic and its complex information, allowing students to comprehend, create new ideas and build connections. Through the use of colors, images, and words, mind mapping encourages students to begin with a central idea and expand outward to more in-depth sub-topics.

Launch a wiki page or blog for a collaboration assignment: A blog is a discussion or informational website published on the World Wide Web consisting of discrete, often informal diary-style text entries. Posts are typically displayed in reverse chronological order, so that the most recent posts appears first, at the top of the web page. A wiki is a website that allows the easy creation and editing of any number of interlinked web pages via a web browser using a simplified markup language.

IV. HISTOGRAM

A **histogram** is an accurate representation of the distribution of numerical data. It is an estimate of the probability distribution of a continuous variable and was first introduced by Karl Pearson. It differs from a bar graph, in the sense that a bar graph relates two variables, but a histogram relates only one. To construct a histogram, the first step is to "bin" (or "bucket") the range of values—that is, divide the entire range of values into a series of intervals—and then count how many values fall into each interval. The bins are usually specified as consecutive, non-overlapping intervals of a variable. The bins (intervals) must be adjacent, and are often (but not required to be) of equal size.

IV.I. PARTS OF A HISTOGRAM
1. **The title:** The title describes the information included in the histogram.
2. **X-axis:** The X-axis are intervals that show the scale of values which the measurements fall under.
3. **Y-axis:** The Y-axis shows the number of times that the values occurred within the intervals set by the X-axis.
4. **The bars:** The height of the bar shows the number of times that the values occurred within the interval, while the width of the bar shows the interval that is covered. For a histogram with equal bins, the width should be the same across all bars.

IV.II. IMPORTANCE OF A HISTOGRAM
Creating a histogram provides a visual representation of data distribution. Histograms can display a large amount of data and the frequency of the data values. The median and distribution of the data can be determined by a histogram. In addition, it can show any outliers or gaps in the data.

IV.III. DISTRIBUTIONS OF A HISTOGRAM
A normal distribution: In a normal distribution, points on one side of the average are as likely to occur as on the other side of the average.

A bimodal distribution: In a bimodal distribution, there are two peaks. In a bimodal distribution, the data should be separated and analyzed as separate normal distributions.

A right-skewed distribution: A right-skewed distribution is also called a positively skewed distribution. In a right-skewed distribution, a large number of data values occur on the left side with a fewer number of data values on the right side. A right-skewed distribution usually occurs when the data has a range boundary on the left-hand side of the histogram.

A left-skewed distribution: A left-skewed distribution is also called a negatively skewed distribution. In a left-skewed distribution, a large number of data values occur on the right side with a fewer number of data values on the left side. A right-skewed distribution usually occurs when the data has a range boundary on the right-hand side of the histogram.

A random distribution: A random distribution lacks an apparent pattern and has several peaks. In a random distribution histogram, it can be the case that different data properties were combined. Therefore, the data should be separated and analyzed separately.

V. METHODOLOGY

A survey was taken among 300 students in the college for the effective teaching method

Table 1: a survey data for innovative teaching method among students

SNO	METHODOLOGY	STUDENT
1	A	200
2	B	250
3	C	199
4	D	100
5	E	280
6	F	150

- **A- Run a virtual field trip.**
- **B- Use videos for mini-lessons.**
- **C- Co-ordinate live video.**
- **D- Add multimedia elements to presentation.**
- **E- Use online mind maps for class brainstorms.**
- **F- Launch a wiki page or blog for a collaboration assignment.**

Sample code:

```
dataset=xlsread('data.xslx','sheet1','A2:A7','B2:B7');
X=dataset(:,1);
Y=dataset(:,2);
plot(X,Y);
title("SURVEY     ON     BEST     TEACHING
METHODOLOGY");
Xlabel("METHODOLOGY");
Ylabel("STUDENTS");
```
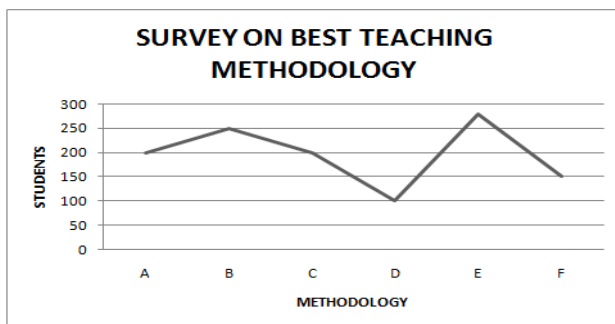

Fig.1 a graphical representation of survey data in teaching methodology

VI. FUTURE SCOPE

Furthermore, there are implemented various technology in the teaching field. For the generation there would be implement innovative teaching methods using technology be introduced. Some of them are 1)Flash notes-it allows students to upload notes and sell them to others,2) Lore-a social software allows professor and students to communicate, follow one another , and discuss class work and lectures,3) Celly-it is a text-messaging network that allows anyone to create a network anywhere.

VII. CONCLUSION

Typically, the selection of and participation in professional learning opportunities is up to individual teachers. There often little attention to developing collective capacity for best teaching at the building and district levels or offering teachers learning opportunities tailored to their specific needs and offered in ways that support cumulative learning over time. Designing effective learning environment includes considering the goals for learning and for students. This collation highlights the fact that there are various means of approaching goals of learning and furthermore, that goals for students change overtime.

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