



## A Survey on the Effectiveness of Video Based Teaching at University Level

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### ABSTRACT

This study surveyed the effectiveness of video-based teaching at the university level, specifically identifying the uses and problems associated with video-based instruction. The study was descriptive in nature employing a survey method. The population consisted of all 836 students from the Faculty of Social Sciences at the University of Kotli AJ&K. Using simple random sampling, 270 students were selected as the sample. A five-point Likert scale questionnaire was developed, validated by two educational experts, and tested for reliability using Cronbach's alpha ( $\alpha = 0.81$ ). Data were collected personally by the researcher and analyzed using SPSS version 23.0 with descriptive statistics. Results indicated strong student agreement regarding the uses of video-based teaching, including introducing students (79% agreement, mean=3.92), presenting case studies (100%, mean=4.44), conducting interviews (100%, mean=4.35), and delivering course information (100%, mean=4.62). Regarding problems, students reported issues with video-based learning (96%, mean=4.29), listening difficulties (96%, mean=4.21), communication problems (91%, mean=4.10), inability to learn social skills (94%, mean=4.14), lack of technological proficiency (97%, mean=4.18), and financial challenges (88%, mean=4.03). Regarding effectiveness, students agreed that video-based teaching creates engaging sensory experiences (87%, mean=3.98), is accessible on multiple devices (95%, mean=4.21), increases student engagement (95%, mean=3.90), offers flexibility to pause and rewind (100%, mean=4.63), enables flipped classrooms (96%, mean=4.16), and facilitates remote learning (100%, mean=4.31). The study concludes that video-based learning is an effective tool for university-level instruction offering numerous benefits; however, significant challenges exist including listening difficulties, communication barriers, limited social skill development, technological proficiency gaps, and financial constraints that need to be addressed for optimal implementation.

## **Introduction**

Education has a great effect on the way a child grows and changes. When a child learns and copies traditions and customs, the child develops new ways of doing things, enhances the mind, and is able to understand the notion of fairness and the sense of beauty. This cycle of learning goes on throughout the entire life, as our very being gets stronger through the lessons learned.

Essentially, learning means the modification of behavior due to the experiences one has had, and the different teaching-learning tools assist in the learning process by stimulating, motivating, and directing one's attention towards the teacher.

Instruction is still one of the major points of educational planning as well as a very main part in the execution of educational goals. One of the most common ways of teaching in universities is lecturing a big number of students at the same time and then having tutorials, workshops, and personal studies. But, there are lots of other modes that are so good that they can be very helpful such as flipped classrooms and problem-based learning. Zhang, Zhou, Briggs, and Nunamaker (2006) stated "demo video in learning through internet can greatly change knowledge carrying of effectiveness when these videos have interactive features that make learners actively involved instead of passively."

At present, the use of videos for educational purposes is still an element that is used considerably in universities. From movies to watching, nowadays video-based learning encompasses digital-interactive-platforms. Sablic, Mirosavljevic, and Skugor (2021) collected a very detailed list and info on the many studies about video-based learning that were released in the period from 2008 to 2019. The development of the usage of videos in schools is a true reflection/document of the changed needs and expectations of the students-that is why it was the main point/centerpiece of the research.

The use of instructional video technologies has been a major topic in educational research, with many studies published to date. For instance, Brame (2016) came up with a set of principles and tips for teachers who want to produce educational videos that really engage students and enhance their knowledge. Among other things, she explained that educational videos have the potential to significantly improve student learning, especially when they include such features as dividing the content into smaller parts, using cues to highlight important information, and requiring learners to engage in active generation of information. Also, a thorough literature study by Noetel, Griffith, Delaney, Sanders, Parker, del Pozo Cruz, and Lonsdale (2021) confirmed that instructional videos are indeed beneficial for learning at the university level and that replacing traditional lectures and other forms of instruction with video lessons alone only result in a small increase in student achievement whereas supplementing teaching with videos leads to substantial learning gains.

In a review article, Kay (2012) analyzed the research on the use of video podcasts in education and concluded that they are a very effective learning tool, especially when they are brief, highly organized, and contain multiple ways of displaying the material. For its part, Giannakos (2013) conducted a comprehensive review of research on video-based learning and came up with the main features that determine its success, such as video duration, quality of production, and the addition of interactive components that encourage students to participate actively in the learning process.

This study is motivated by several fundamental disconnects between current knowledge and practice. For one thing, video-based instruction is gradually becoming a standard feature of the higher education curriculum, yet there is a scarcity of the country-specific evidence for its effectiveness at the university level in the case of Azad Jammu and Kashmir. Secondly, a great

majority of the research articles emphasize the positive role of videos in learning, very few of them, however, focus on the problems and challenges students encounter when using this mode of learning. Thirdly, the status quo has it that the traditional methods are the only major ones used for the teaching and learning function in the universities even though there is quite a bit of evidence now that they are failing to meet the needs of all the students in a diverse way. Fourth, the rapid changes in technology leading to the transformation of education require a thorough study of how video-based teaching can be implemented most effectively and what obstacles need to be tackled. Fifth, university leaders and decision-makers need guidelines supported by evidence to help them decide on educational technology investments and teacher professional development programs. This study fills these gaps by offering in-depth information on the pros and cons of video-based teaching as experienced by students, thus helping to enhance teaching methods in universities.

### **Statement of the Problem**

Teachers employ various teaching strategies to instruct students. However, traditional or old approaches often fail to provide students with adequate knowledge. Consequently, this research investigated the effectiveness of video-based teaching methods at the university level.

### **Objectives of the Study**

- i. To identify the use of video-based teaching at university level.
- ii. To find out the problems in using video-based teaching
- iii. To explore the effectiveness of video-based teaching in the learning process at university level

### **Research Questions**

- i. What are the uses of video-based teaching at university level?
- ii. What are the problems in using video-based teaching?
- iii. What is the effectiveness of video-based teaching in the learning process at university level?

### **Significance of the Study**

Numerous stakeholders in the educational ecosystem would find this research substantially significant. For instance, teachers can use the study as one of their empirical evidences on how video really helps students to increase their learning so that they will be able to make wise choices when they decide to integrate video-based instruction into their pedagogical practices. Concretely, educators will be guided by this study in helping students better understand through clarifying and establishing student understandings of complex concepts, activities using visual and auditory representations that traditional means can hardly provide. Besides, teachers will also understand better the different types of problems students encounter during video-based learning, thereby being able proactively to solve listening issues, communication problems, and the lack of technological skills, which they will mainly find in their instructional design.

With this research, students will also be well informed on what are the advantages and disadvantages of video-based learning so that they can decide to be video content still more effective consumers. Knowing that videos afford the possibility to pause, rewind, and skip content allows students to come out with greater control over their learning and at the same time their comprehension levels. Through this study students who are not able to develop social skills with video learning and feel uncomfortable with video learning will be able to explain these problems to the teachers and ask for the appropriate help.

For curriculum developers and educational administrators, this research provides valuable data on how video-based teaching can be systematically integrated into university programs. The evidence regarding high student agreement on uses such as case studies, interviews, and course information delivery supports the expansion of video-based resources across disciplines. Administrators can use these findings to justify investments in technological infrastructure, teacher training programs, and student support services that address the identified challenges.

This research offers region-specific data that policymakers in higher education, especially those concerned with Azad Jammu and Kashmir, can use for decisions on educational technology adoption and resource allocation. The results about students facing financial constraints (88% of the students agreed) call for policies that will guarantee that video-based learning resources are accessible to the entire student population. Besides that, the research helps to expand the academic discussion of the effectiveness of educational technology and adding to the scarce body of research from developing country environments, particularly in the context of Azad Jammu and Kashmir.

The main purpose of this study for future researchers is to establish baseline information on the effectiveness of video-based instruction at the university level in Kotli, AJ&K. This will serve as a basis for comparative research work of different regions, institutions, and subjects. The methodological approach and the research instrument used in this study can gain adaptability and refinement for researches on different educational levels. Besides, recognizing problems such as listening difficulties, lack of communication and technological skills provide a number of ways for researching ways of solving and dealing with the problems in a targeted fashion.

## **Literature Review**

### **Theoretical Framework: Cognitive Theory of Multimedia Learning**

The level of video-based learning's impact on students' knowledge could be explained using the cognitive theory of multimedia learning. Brame (2016) insists that a carefully designed incorporation of videos in education can drastically alter students' learning experience, as videos are often preferred by students since they allow accommodations of flexible study schedules. Besides, the cognitive theory of multimedia learning outlines ways to improve video layout, that is, the methods to divide difficult content into smaller parts, mark prominently the main points and get rid of unrelated elements so as not to cause cognitive overload.

### **Video-Based Teaching and Learning**

Video-based learning or education through videos has long been one of the main strategies in educational settings. Sablic, Mirosavljevic, and Skugor (2021) traced the history of application of videos in education and teaching starting from the first-time passive viewing as to the present modern interactive digital platforms. They concisely reviewed the research from 2008 to 2019 to find out that video-based learning has always been positively associated with student engagement and academic achievements in a wide variety of educational settings.

Researchers have conducted experiments to measure the effectiveness of instructional video technologies. Zhang et al. (2006) researched interactive video and learning effectiveness in online learning environments. The results showed that interactive features considerably improved learning outcomes by increasing learner engagement with the material. Their study revealed that learners who had the possibility to interact with video content through navigation controls and embedded questions outperformed those who only passively watched videos.

### **Video Production and Student Engagement**

There have been many studies investigating the connection between video production features and student involvement. For instance, Guo, Kim, and Rubin (2014) explored how the way videos are made can influence learner engagement in massive open online courses (MOOCs). They analyzed data of several million instances of video watching. One of their major results was that the videos of shorter duration (less than six minutes) engage the students a lot more than the longer ones, since students generally lose interest after six minutes.

Moreover, the study also showed that videos made in a more personal and conversational way tend to be more engaging than formal and highly-produced lectures. Another thing was that videos with instructors talking fast and enthusiastically have the potential to attract students' attention more. Besides, the ones that featured Khan-style tablet drawing tutorials were preferred by students over traditional classroom lecture recordings or PowerPoint slides.

### **Video Podcasts and Knowledge Acquisition**

Kay (2012) did an extensive review of the published material on the use of video podcasts in school, looking at how effective they are for delivering knowledge and increasing student satisfaction. He concluded that video podcasts, particularly when they are under 15 minutes, well-organised, and offer several forms of content like text, audio, and visuals, are a powerful medium for learning. Besides, students are almost always very happy with video podcasts and they highlight such advantages as the freedom to repeat the content as often as they want, the ability to learn at their own pace, and the ease of taking the content on different devices as their main reasons for satisfaction with video podcasts.

### **Systematic Review of Video-Based Learning**

Noetel et al. (2021) did a meta-analysis and systematic review on video-based learning in higher education, which is quite exhaustive. Analyzing a large number of experiments, they came to the conclusion that simply replacing lectures by video produces a modest improvement in learning ( $g = 0.28$ ), while a combination of video and other forms of teaching brings about substantial learning gains ( $g = 0.80$ ). The study also pointed out that videos that involve active learning techniques are most efficient. For instance, students can be guided to take notes, questioned during the video, or asked to summarize or explain what they have seen, etc. Besides, the authors found videos very helpful in teaching skills and procedural knowledge as well as visualizing complex phenomena for which text descriptions are often inadequate.

### **Research Synthesis**

Giannakos (2013) investigated the research on video-based e-learning by looking at the results of a number of studies and identifying the main features that affect their efficiency. The article listed video duration, quality of filming, presence of the teacher, and incorporation of game-like elements as significant factors. Also, Giannakos arrived at the decision that video-based education will yield the highest results if the videos are only a part of the overall learning scheme whereby students watch online video lessons and then carry out face-to-face exercises and discussions. The implication of this result is that video-based learning should come as a support to the conventional methods of instruction rather than a substitution for them.

### **Research Methodology**

This research was descriptive and used a survey to find out how effective video-based teaching was at university level in District Kotli, Azad Jammu and Kashmir. The population of the study

was all 836 students of the Faculty of Social Sciences, University of Kotli AJ&K. Through simple random sampling, 270 students from all departments of the Faculty of Social Sciences were selected as the sample. The researcher developed a five-point Likert scale questionnaire on the basis of objectives and review of the related literature. Two educational experts from the Department of Education, University of Kotli AJ&K validated the questionnaire, and it was also pilot tested with 15 students from the Department of Sciences. for checking the reliability of the instrument, Cronbach's alpha statistical technique was used, and the reliability coefficient obtained was 0.81 that represents good reliability. The researchers personally collected the data and distributed 270 questionnaires among students asking the students to read and fill in the questions. The data collected was analyzed with the help of SPSS version 23.0 and descriptive statistics (frequency, percentage, and mean) were used for analysis.

## Results

### Objective 1: To Identify the Use of Video Based Teaching at University Level

**Table 1: Student Responses Regarding Uses of Video Based Teaching (N=270)**

Statement	SA (%)	A (%)	PA (%)	DA (%)	SDA (%)	Mean
Video based learning is a great way to introduce students	48	27	4	-	-	3.92
Video based learning is used to assist new students to complete admission process	45	34	15	6	-	4.20
Video based learning is present to direct instruction	38	35	18	9	-	4.01
Video based learning is used for presenting case studies	56	32	12	-	-	4.44
Video based learning is used for conducting interviews	47	41	12	-	-	4.35
Video based learning is used for learning outside the classroom	57	30	6	7	-	4.36
Video based learning is used to capture lecture content	32	34	15	15	3	4.14
Video based learning is used to deliver course information	69	24	7	-	-	4.62
Video based learning is used to access students from all over the world	39	42	18	1	-	4.19
Video based learning is used to review all sessions	56	34	10	-	-	4.47

Table 1 presents student responses regarding the uses of video based teaching at university level. The data indicate that 100% of students agreed with statements about presenting case studies (mean=4.44), conducting interviews (mean=4.35), delivering course information (mean=4.62), and reviewing sessions (mean=4.47). The highest level of agreement was for delivering course information with 69% strongly agreeing and a mean score of 4.62. For introducing students, 79% agreed (mean=3.92). Assisting with admission processes showed 94% agreement (mean=4.20). Direct instruction received 91% agreement (mean=4.01). Learning outside the classroom showed 93% agreement (mean=4.36). Capturing lecture content received 81% agreement (mean=4.14). Global access to students showed 99% agreement (mean=4.19). These findings demonstrate that

video based teaching serves multiple important functions at the university level, with particularly strong support for its role in content delivery, case presentations, and session reviews.

**Objective 2: To Find Out the Problems in Using Video Based Teaching**

**Table 2: Student Responses Regarding Problems in Video Based Teaching (N=270)**

<b>Statement</b>	<b>SA (%)</b>	<b>A (%)</b>	<b>PA (%)</b>	<b>DA (%)</b>	<b>SDA (%)</b>	<b>Mean</b>
I have an issue with video based learning	50	34	12	4	-	4.29
I face listening problems during video based learning	48	33	15	4	-	4.21
I face problem of communication during video based learning	45	30	16	9	-	4.10
During video based learning, I am unable to learn social skills	46	31	17	6	-	4.14
Adapting video based learning environment is challenging for me	44	30	17	9	-	4.08
I lack proficiency in using various interfaces of video based learning	38	46	13	3	-	4.18
I have difficulties in learning a new technology in video based learning	51	30	12	7	-	4.26
I am diverted by an overly complex technology during video based learning	45	31	17	7	-	4.13
I face financial challenges to accessing technology during video based learning	43	29	16	12	-	4.03
I feel uncomfortable during video based learning	38	37	14	11	-	4.04

Table 2 shows how students responded to the problems they have encountered with video-based teaching. According to the figures, more than 90% of the students agreed with most problem statements. The major one was the inability to use different interfaces where 97% of them agreed and the average score 4.18. Other problems were with video learning which 96% (mean=4.29) said, listening problems 96% (mean=4.21), communication problems 91% (mean=4.10), no social skills 94% (mean=4.14), adapting 91% (mean=4.08), new technologies 93% (mean=4.26), getting sidetracked by complex technology 93% (mean=4.13), financial problems 88% (mean=4.03), and lastly discomfort during video based learning 89% (mean=4.04). It is clear that, although students appreciate video-based teaching, they have serious issues with this mode of education such as lack of technological proficiency, difficulties in listening and communicating, social skill limitations, and financial problems.

**Objective 3: To Explore the Effectiveness of Video Based Teaching in Learning Process at University Level**

**Table 3: Student Responses Regarding Effectiveness of Video Based Teaching (N=270)**

<b>Statement</b>	<b>SA (%)</b>	<b>A (%)</b>	<b>PA (%)</b>	<b>DA (%)</b>	<b>SDA (%)</b>	<b>Mean</b>
Video base teaching create more engaging sensory experience	39	34	14	3	-	3.98
Video base teaching is accessible on	46	34	15	5	-	4.21

a multitude of devices						
Video base teaching greatly assist in the learning of all subjects	35	28	13	17	7	3.64
Video base teaching increase proficiency in digital literacy	37	32	17	14	-	3.91
Video base teaching increase student engagement	31	43	17	6	3	3.90
Videos offer flexibility to pause, rewind, or skip	48	35	17	-	-	4.63
Video base teaching enable teachers to create a flipped classroom	46	34	16	4	-	4.16
Video base teaching facilitate remote learning opportunities	47	38	15	-	-	4.31
Video base teaching enable teachers to track student engagement and attendance while viewing	34	44	19	3	-	4.07
Video base teaching help to broaden the number of students	30	38	18	9	5	3.78

Table 3 displays the results of students' perception on the effectiveness of video based teaching. According to the data, all students (100%) believed that video presentations allow users the flexibility to pause, rewind or skip (mean=4.63) and that video based teaching is a tool for remote learning (mean=4.31). Additionally, students gave a 96% approval rate (mean=4.16) to the idea of creating flipped classrooms with the help of video content. A high 97% (mean=4.07) supported the notion of tracking student engagement and attendance through the use of videos. Devices-dependence/accessibility was supported by 95% (mean=4.21). While ~87% (mean=3.98) were in favour of creating engaging sensory experiences, ~95% (mean=3.90) went on to say that video teaching can increase student engagement. Digital literacy proficiency was increased according to 86% (mean=3.91). Broaden the student base was supported by 86% (mean=3.78).

The least agreement which was still a majority (76%) on the question of video helping to learn all subjects (mean=3.64).

These results indicate that video based teaching is a highly effective method of teaching in several ways. Among these ways are providing flexibility, supporting remote learning, helping with flipped classrooms, making educational content accessible, and increasing student engagement.

## **Conclusions**

Video based learning in general is one of the most effective methods that can both introduce students to the academic environment and support the admission processes of the students. Video based learning is only one of several ways of using videos: for example for presenting case studies and interviews and suggesting learning outside the classroom; capturing lecture content, delivering course information, accessing students globally, and reviewing sessions. The greatest deal of agreement was found in the area of case studies, interviews, course information delivery, and session reviews.

The students complain of a lot of problems when it comes to video based learning. These include listening difficulties, communication problems, not being able to learn social skills, the difficulty of adapting to the environment, the low level of technological skills, the difficulties of learning new technology, the distraction that comes from the use of complex technology, financial

constraints, and discomfort which is more general. According to the respondents, the biggest problem was the lack of proficiency in the use of the different interfaces.

Teaching through videos enables the creation of compelling sensory experiences and can be used on various devices. In addition, this pedagogical approach is effective in a wide range of subjects, fosters the development of digital literacy skills as well as promotes student engagement. Besides providing flexibility in terms of pausing, rewinding or skipping content, videos also allow instructors to establish flipped classrooms, offer remote learning opportunities, keep track of students' engagement and attendance, and increase access to education for a larger student population. These results correspond to the cognitive theory of multimedia learning indicating that video content which is planned properly lessens cognitive load and improves knowledge retention via dual-coding of visual and auditory inputs. On the other hand, video teaching still has room for development with universities needing to ensure they consider drawbacks and overcome them for optimal results.

## **Recommendations**

In light of the findings, we suggest the following:

Educators might consider making short and crisp video lectures that highlight only the main learning goals. Short videos aid keeping students focused and also help in managing students' cognitive capacity during the learning process. On the other hand, very long video lessons could possibly lead to students' distraction and overlooking important information. Hence, teachers should consider dividing difficult content into smaller, focused video parts

Institutions could roll out designated technical training and provide continuous support so that students as well as teachers are able to develop the right technological competencies. This training might include a component on the interactive features of the video-based teaching activities and platforms. Professional development workshops on a regular basis can give teachers the opportunity to familiarize themselves with the most recent video technologies. Students can also be a part of introduction sessions where they learn the proper use of video learning tools.

Teachers might guarantee that students have been taught how to carry out safe procedures when handling any equipment with which they are interacting such as projectors during video-based teaching sessions. Apart from that, training sessions might be designed to cover the health and safety aspects related to all types of technological gadgets. Being cautious when handling can keep both the users and the costly instruments safe from any kind of damage or injury.

Constantly communicating safety matters, using checklists as well as reminders, could be a useful mechanism to keep these crucial safety practices fresh in memory throughout the school year.

There could be a special area inside the classroom that is reserved for video based equipments, this is to ensure that all the students are able to view in the best conditions possible. Such devices might be set up at the front of the room on a level surface so as to give also a good visibility and accessibility. Classroom desks, which often are with a slanted surface, can present certain difficulties which, if necessary, can be overcome by permitting students to place their devices on top of books. The right arrangement of the classroom plays a very important role in enhancing the success of video based education.

Both the instructors and learners can coordinate their efforts and become aware of the knowledge of situated learning at universities and in other external environments so as to effectively leverage video based education. Realizing the potential of video learning for real life situations may become

a motivational factor for students leading to their engagement. Teachers should make it a point to bring connections between video materials and their real-life applications during lessons. By implementing this method, a mere watching of a video is converted into an active, rich learning experience.

Higher education institutions may initiate the creation and development of comprehensive student support systems aimed at overcoming the problems with listening, communication, and technological literacy that have been brought to light by this study. Social establishments for technical aid and help desks may be/he founded to provide assistance to students who face difficulties related to videos. Besides that, peer tutoring schemes may be used to match up students with high technological capabilities to those in need of additional support. Also, regular feedback sessions may serve as a tool for the institution to discover and effectively deal with newly arising problems.

Institutions may want to think about giving students technological equipment or helping them financially in order to overcome the difficulties that they might face in learning via video. The provision of laptop, tablet, or wireless internet hotspot loans could be a way to remove economic hurdles for students to partake. Getting together with technological firms would be a way of getting discounted devices or services for students who qualify. Providing students with funding demonstrates the school's readiness to make educational access equitable for everyone.

Extra activities aimed at assisting students in the continuous development of their social skills alongside video-based learning could be implemented. Group discussions after video lectures could be a way to have students interact with their peers and make meaning collaboratively. Doing project-based learning activities that go hand-in-hand with video content can be a way to develop not only communication skills but also teamwork skills. Using a mix of video instruction and on-site interaction, students can be developed in a balanced manner.

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