Relevance of Infographics, Collages, and Videos in the Learning of Medical English

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Abstract
Medical education is extremely important. Knowledge of English is essential to pursue medical education. Therefore, policymakers and educators usually focus on English for Specific Purposes (medical English in this context). The present paper studies the relevance of infographics, collages, and videos in teaching medical English in the Kingdom of Saudi Arabia (KSA). The paper elicits insights and inputs from the latest socio-cultural and pedagogic perspectives across the globe by researching the sheer possibility of cognitive development and learning medical English through the integration of infographics, collages, and videos. The paper also sheds light on medical classrooms where the learners have had very limited exposure to English. As a result, technology could be one of the motivational and teaching-learning strategies. The objectives were to elicit the perceptions of medical English teachers on the relevance of infographics, collages, and videos and to explore the possible effect of multimedia on the learning of medical English. The research question is: what is the significance of multimedia (infographics, collages, videos) in teaching-learning medical English. The teacher sample was selected from the applied college, King Abdulaziz University, Jeddah, Saudi Arabia. This study was qualitative-exploratory, as the data was elicited from interview questions. Later, responses were coded to do thematic analysis. Multimedia (infographics, collages, and videos) was found useful and effective in learning medical English. Medical teachers should incorporate such tools to make the learning process easier for target learners. Professors of medical subjects, i.e., Anatomy or physiology should also integrate such tools for better learning outcomes.

Keywords: Collages, infographics, Medical English, multimedia, strategies, videos

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Introduction

The English language is the key to medical education. Many aspirants fail to join medical or health-related programs due to low proficiency in English. Similarly, quite a lot of students have issues grasping lectures because of language issues, especially in a country like Saudi Arabia where Arabic dominates and English only serves Specific Purposes (ESP). Typically, medical terms are included in the curricula of various medical or health-related programs. However, ESP strategies can be employed in other classes such as anatomy, physiology, etc., especially because the learners' proficiency with the medium of instruction (English) is not appropriate.

Technology's role in hospitals and the educational sector has clearly emerged as a necessity, especially during the COVID-19 pandemic. In other words, these days, digital ecology is an essential requirement for teaching students in general and medical students in particular. Though quite many studies have been conducted in the context of the utilization of computers and the integration of technology and web resources, the effect of infographics, collages, and videos in an English classroom for medical students has not been much researched. It is a fact that all medical teachers cannot be aware of the tools and techniques for creating collages, designing infographs, or integrating appropriate videos of medical or health contexts to create a proper learning environment for medical students. Nearly all modern institutions in Saudi Arabia are technologically equipped, and teachers are appropriately trained to integrate technology. Multimedia can be employed as a strategy that depends on integrating text, graphics, collages, and videos in the process of teaching. It is believed that the integration of some interesting media can yield far better learning outcomes. It was hypothesized that multimedia can enhance learning English because these are interesting tools that can attract learners and make learning easier and faster.

Following are the objective of the present study. Research questions are based on the objectives of the study.

1- to elicit the perceptions of English language teachers on the relevance of (infographics, collages, and videos)
2- to explore the effect of infographics, collages, and videos on learning medical English.

Research Questions
1- What is the significance of multimedia (infographics, collages, videos) in teaching-learning medical English at KSA?
2- What are the perceptions of English language teachers on the relevance of (infographics, collages, and videos)?

The study aims at exploring the relevance of multimedia in general, and infographics, collages, and videos in particular. As mentioned, this is a qualitative-descriptive study which elicited data from interviews conducted with teachers of King Abdulaziz University, Saudi Arabia. Following literature review includes studies belonging to the relevance of multimedia especially infographics, collages and videos.

Literature Review

The literature review of the present study focuses on the concept of multimedia in general and infographics, collages, and videos in particular. The approach follows from general to specific studies. In other words, certainly important, relevant, and latest studies have been included that
support the integration of multimedia in general. A specific review includes certain significant studies belonging to infographics, collages, and videos that are found helpful in teaching-learning. Recently, the use of digital media in tertiary-level classrooms has gone through significant phases (Khan, 2014). But COVID-19 pushed institutions and teachers to make use of technology at any cost. Wantulok (2015) has provided a long list of reasons why technology is so crucial to education. Learners can acquire knowledge and skills through self-learning strategies in multimedia.

Visualization is considered information architecture or infographics, says Smiciklas (2012). Visuals, visualization, and visual effects are quite important in the process of learning and teaching. Visualizations provide a chance to make their idea visible, derive meaning, and finally organize the thinking process (Chen & McGrath, 2004). By using visual presentations, one can configure, organize, and edit information.

The main purpose of visual creations (such as infographics) is to transfer the acquired knowledge and to memorize it for future use. To visualize information, one can utilize various interesting tools such as graphic organizers, pictograms, etc. (Nuhoglu & Akkoyunlu, 2015). Borkin et al. (2013) found a close connection between visualization types and memory levels.

**Concept, Relevance, and Utilisation of Infographics**

According to Newsom and Haynes (2004), an infographic is made from graphic and visual graphic information, its representation, and knowledge or data words. Multimedia as an educational tool combines some basic types of media such as text, graphics, sounds, videos, and animations (Asthana, 2006). Another study by Al-Obaid (2020) says that the integration of various technologies can enhance the learning environment and better learning outcomes. Aoki (2010) revealed that the students who were exposed to ICT technology demonstrated better ‘knowledge’, presentation skills, and innovative capabilities than those who were not experienced. Aloraini (2012), in his full-length article on the impact of using multimedia on students’ academic achievement, concluded the significant effect of multimedia on learning outcomes.

Heer et al. (2010) considered infographics as the architecture of information. Infographics serve the purpose of informing and motivating the target audience (Krum, 2013). In addition, an infographic image can be employed for meaningful interaction (Vanichvasin, 2013). A teacher can use infographics in a classroom to engage students in discussing a point either face-to-face or online (MacQuarrie, 2012). Researchers have found that the visual impact of an infographic increases interaction and understanding (MacQuarrie, 2012; Smiciklas, 2012). Bunmak (2021) proved that multimedia help teaches vocabulary in English classrooms in Thailand. Mahartoyo and Aryusmar (2022) and Tang (2022) confirmed the impact of a multimedia-based English language teaching model to improve proficiency. In addition, Li (2022) also studied the effect of Multimedia Technology application in the English Teaching of College Students Majoring in Art and contended its relevance.

An infographic can be utilized as a tool for the meaningful transfer of complex content into a simple one. Nowadays, with digital technology, information and visuals are frequently integrated through academic platforms and social media. Besides, infographics are also being used to transfer complex information related to economics (Lankow et al., 2012). Learning with infographics creates a mental scheme (Hart, 2013).

The canvas of *infographics* may alternatively depict a story, process, or idea. Hence, it should be taken well into consideration that infographics can be designed through the effective use...
of appropriate visual presentation (Lamb & Johnson, 2014). Huseyin (2017) studied the psychological impact of infographics in education and concluded that such visuals and multimedia exert an effect on learners’ minds that ultimately results in achievement or better performance. In sum, infographics are significant tools for learning or teaching because they include visuals, design elements about the content, and context (such as maps, tables, diagrams, typography, color, etc.).

Figure 1. Infographics (designed by the researcher)

Similarly, different infographics can be designed to teach a concept related to medical, health, or hospital-related topics. Such an attempt will enhance learners' perception, conceptualization, and, finally, cognition. In addition, it will attract some passive learners who may take a more active part in classroom activities.

Relevance of Collages
Collage, in apparent perception, reveals the visual appearance of objects and events (Acharya, 2007). Osborne (1970), for instance, defined collage as a pictorial technique that uses "photographs, news cuttings, and all kinds of objects in certain arrangements by pasting and often combining with painted passages" (p.251). Matusiak (2019) hinted at other issues, indicating that some students are not good at selecting, evaluating, and using images. Therefore, they can be trained in this direction as well.

Ghada et al. (2012) described one strategy—that of creating a collage—that promoted interactive learning. Williams (2000) studied collage work as a medium for guided reflection in the clinical supervision relationship. Collages can be described as one form of art that serves as a means of enhancing communication and developing self-expression. Norris et al. (2007) studied the application of collage to explore very young adolescents’ knowledge about HIV and AIDS in four senior primary classrooms and found it useful.

Sometimes textual data does not attract much attention; therefore, it is accompanied by images to help the user better understand the content. Taking clues from this, we can utilize collages to convert any given text into a digital image collage. Kannan and Khuri (2018) worked on creating digital collages inspired by English texts and concluded that the experiment was effective and result oriented.
Relevance of Videos

Educational videos have become an essential part of higher education, providing an important content delivery tool in many classroom settings, whether blended, online, or virtual (Brame, 2016). The importance of technology integration is evident, especially in light of the current pandemic situation. Schmid et al. (2014) contend that technology can increase learning probabilities. Numerous studies have proven that videos can be exciting tools for learning any subject (Lloyd & Robertson, 2012; Rackaway, 2012; Kay, 2012; Allen & Smith, 2012; Hsin & Cigas, 2013).

Another study conducted on English and management students reported that digital videos helped promote context-based learning. Videos are usually attractive, especially for visual learners, as they create emotional involvement (Hakkarainen et al., 2007; South et al., 2008). Pedagogically, it has been observed that videos can connect learners with the knowledge, tasks, and target activities.

It has been noted that video enables learning via reflection. On the other hand, face-to-face or traditional teaching is characterized by more participation via conversation (South et al., 2008). The idea is supported by another researcher, Lange (2008), who thinks that video may also stimulate interactive learning. Prensky (2005) feels students generally receive information well through videos as they enjoy watching them, especially those students who are said to be introverted but can participate well, like extroverts.

Studies have already revealed facts and findings about the inappropriate impact of educational policies, practices, and curriculum design on learning and teaching outcomes. Learning objectives can never be attained without adequate planning, suitable curriculum designs, efficient professional staffing, proper teaching strategies, evaluation, etc. However, if some of the recruited staff members are not well equipped with teaching strategies and are not ready to take up the challenges of teaching, in-house training, and Continuous Professional Development (CPD), this is an ultimate demand. The training may be related to textbook-related materials, teaching strategies for using technology in classrooms, and other areas where improvement is needed.

Abrahamson (1978) conducted many studies by visiting almost half of the American medical institutions and found specific existing curriculum problems described as "diseases of the curriculum." Through extensive analysis, the researcher identified nine different entities. According to him, the basic sciences supporting the study of education as a discipline were not well developed to thoroughly understand the disease process or health-related issues.
In an exciting initiative, the society's curriculum development team focuses on the launch of a novel curriculum to attain skills development while using animals for experiments in biomedical research (British Pharmacological Society, 2018). Based on new educational insights and pedagogic inputs, many factors, including the teaching methods and learning process, would make teaching pharmacology quite challenging.

**Studies Related to English for Specific Purposes**

ESP in language teaching and learning is an approach related to specific disciplines and oriented to respond to the learners' needs. It helps learners connect what they have learned and enables them to use the target language in the intended subject (Ahmed, 2014; Hans & Hans, 2015). One of the aims of learning English for specific purposes is to enhance the learners' proficiency level in the English language concerning the subject matter. That will also increase learners' motivation and interest in the subject.

ESP is studied comprehensively, and conclusions were drawn regarding teaching English to pharmacy students. Some of the findings emphasized three aspects in detail. These are the resources, the significance, and the applications. It was concluded that there exists greater exigency regarding language proficiency within medical professions as competition for jobs is rising. Additionally, it was suggested that there has always been a need to modify the curricula of pharmaceutical and medical schools to enhance communication skills (Coroban, 2018). The same case applies to health professionals like pharmacists. Albert (2000) investigated the importance of medical writing, which has grown in the field of the pharmaceutical industry, where the connections cannot be overlooked. In another study, Ahmed (2014) discussed some issues concerning the tasks and challenges of ESP teachers, such as the basic concepts of ESP, teaching issues like ESP effectiveness and teaching strategies, ESP curriculum development, and course design, and ESP teachers' under-preparedness.

The researcher primarily contends that ESP teachers are not specialized in the field but in teaching English. Therefore, one cannot ignore the limitations. In an attempt to analyze both textbooks of English and ESP for legal English published abroad and by Romanian experts to improve the quality of these print resources, the researchers opined that the teacher might not be a law expert. However, he/she can improvise on teaching strategies by self and peer development if he/she has real intentions of effective teaching (Medrea&Rus, 2012). Moreover, it was found that ESP teachers may face crucial challenges since they may lack the necessary knowledge of the subject to teach 'Business English'. That is due to the belief that business English should be taught by the subject teacher rather than by English instructors/professors (Otilia, 2015). Therefore, ESP practitioners must be well-equipped in curriculum development, teaching strategies, and technology integration. It was also explored that ESP courses for pharmacy students are ineffective, particularly in teaching methods that did not attract many students' attention. English competence of final-year students and pharmacists was at a moderate level. In an earlier study, Graham and Beardsley (1986) concluded that a good combination of content-area ESL and ESP was team-taught by a pharmacist who specialized in pharmacy communication and an ESL specialist.

In this connection, Khan (2016a; 2017) concluded that English, in general, and ESP, in particular, are crucially important in academics and professions. Students of medical and pharmacy colleges may face more specific difficulties in learning English, initially because of their humble English backgrounds and secondarily due to complicated terminologies. On the other hand, many
other students encounter problems and difficulties in mastering and using medical terms in English. The aspects in which the difficulties were faced by the participants observed were as follows: the borrowings from Greek and Latin, different types of roots, and lack of practice and opportunities. It was suggested that to deal with the learners' language learning issues, the curriculum be revised and updated following the learners' current and future needs. In addition, teachers should attend professional development and training programs, especially ESP, to be well-prepared for better teaching strategies and maximum outcomes. In this regard, Khan's (2016b) book could be a good starting point as it composes several health-related topics with language practices and different language elements such as sound, words, spelling, meaning, and grammar.

**Technology Integration as a Strategy**

Teaching English for specific purposes for medical and health students requires significant effort to integrate learning materials and technology to communicate well with the target learners. Content- and Language-Integrated Learning (CLIL) may be used as a strategy to impact the learners' skills. It was suggested that teachers and learners could read or listen to interesting online content and learn different skills (Motteram, 2013). Regarding technology integration, Cyrus (2004) shared his valuable thoughts on using electronic media, including computers and other technologies. It was widely agreed that some good and experienced instructors and teachers can boost their self-confidence even more by taking advantage of opportunities for technology training, in particular, to help them and their students master the subject(s) and skills (Villacrés, 2018). Technology can also be integrated into skill development in general and writing skills in particular (Mai et al., 2019).

Another study revealed the effect of Computer-Based Simulation Learning (CBSL) on pharmacy students and concluded that CSL significantly improved knowledge acquisition over didactic lecturing. CBSL and lecture-based learning have different strengths regarding deep processing skills. A study by Lean et al. (2018) on the effectiveness of e-learning in pharmacy education disclosed that e-learning had been studied as an instructional format across various pharmacy education-related subjects. However, it was noticed by the researchers that no systematic reviews had been done on the effectiveness of e-learning. In their review-based study, it was found that e-learning can yield effective results and outcomes. The study concluded that there is a possibility for improvement in the quality of e-learning effectiveness research in pharmacy, for example. In addition, it was also noted that properly validated tools and follow-up research could be essential to cater to the need for effective pharmacy education through e-learning modes.

Almaghaslah et al. (2018) found that students were interested in online learning methods, particularly in specific courses. They recommended setting relevant rules and policies to maximize the benefits of utilizing this technology to promote pharmacy education and enhance students' experiences with online learning in the current research context. A module on e-learning and its effect on online learning in pharmacy education was validated (Suda et al., 2013). In addition, it was checked if its effect on students' insight was also meaningful. Eventually, initial findings supported the idea of the effectiveness and acceptability of online learning as a complementary tool for the hospital pharmacy course. This module was found to have effectively increased students' knowledge of the evaluated topic. To conclude, this study supports the concept of blended learning, which is entirely appropriate in many academic settings.
The preceding reviews did not go into detail about the topic at hand, but there were enough differences in content, dimensions, and approaches to identify the gap in research and justify the current study. The current study is of a unique type as it deals with teaching ESP to students in a health program and different learning issues in pursuing health-related courses through English as a medium of examination or instruction. It is felt that both kinds of teachers need specific training for teaching ESP (medical English) and teaching health-related subjects through an effective medium (English). Training in general, as well as specific training in technology integration, is essential for blending purposes to deal with various issues encountered in learning or teaching.

Due to the limited scope of this paper, many reviews of research in the present context could not be included in all the related areas. However, based on the humble knowledge of the researcher, it was systematically inferred that no study has been found as comprehensive as the present one that directly deals with the teaching of ESP for health subjects in the Saudi context, the teaching of health subjects through general strategies (using English), blended learning, and perhaps a need for training. The most crucial area that has been ignored maybe English as a language of medicine, which is perhaps the most important tool for the delivery of ideas and knowledge that leads to effective learning. Saudi students and teachers encounter more crucial issues in communication channels than any other factor. Most of the teachers and students feel demotivated by the lack of communication.

Method

The present study employed a qualitative descriptive design which may be quite appropriate as it considers the subjective nature of a research problem. Participants are likely to have varied crucial experiences that reflect the initial research question (Bradshaw et al., 2017). This method suits the present study as it generates data related to the questions like who, what, and where of events or experiences from a subjective perspective (Kim et al., 2017, p. 23). Doyle et al (2020) advocate that qualitative descriptive research enables researchers to understand individual human experience in its unique context. Therefore, the present design is quite appropriate for the present research.

Participants

Purposive sampling was employed in the present study for data collection as it was appropriate in the present context. Palinkas et al. (2015) supported that Descriptive research generally uses purposive sampling and a range of purposive sampling techniques have been described. Usually, a small sample size is qualitative descriptive research, yet the researchers need to consider that they have collected sufficient data to attain the study aims (Ritchie et al., 2014).

Research Instruments

Interviews were conducted to collect the required qualitative data. It has been contended that data collection methods in qualitative descriptive research are multiple and primarily discover the phenomena of who, what, and where (Sandelowski, 2000). Mostly, a semi-structured face-to-face interview is conducted for data collection (Kim et al., 2017). Yet focus groups, telephone interviews, and online techniques can also be utilized.

Procedure
Aiming to find out the relevance of multimedia (infographics, collages and videos), the researcher identified the areas of concern to include in the structured interview questions (Appendix A) which could later be analyzed thematically and qualitatively. Six concerned teachers were intensively interviewed at the campus of King Abdulaziz University, Jeddah, Saudi Arabia.

**Data Analysis**

Responses gathered through the interviews were written, coded, and then thematically analyzed. According to Lambert and Lambert (2012), data analysis in qualitative descriptive research is based on the nature and type of data, therefore it does not follow a fixed approach. Chafe (2017) believed that in a qualitative descriptive research, it is always essential to keep the analysis at a level which the research relates (Chafe, 2017). The analysis in qualitative-descriptive research is dictated by the objectives, inductive approaches are generally employed for data analysis and interpretation (Kim et al., 2017).

It has been seen that most researchers utilize content and thematic analyses in qualitative descriptive research. In this connection, Vaismoradi et al. (2013) contend that content and thematic analysis is often required in qualitative descriptive research, however, these techniques are not properly justified as these are unevenly utilized. Sandelowski (2000) pointed out that qualitative content analysis is one of the choices in most descriptive research. On the other hand, there exists a confusion between content and thematic analysis. Some researchers use both types of analyses.

**Findings**

**Thematic Analysis of Interview**

**Theme 1. Relevance of multi-media (infographics, collages, and videos)**

Interview responses confirm that multi-media (infographics, collages, and videos) are highly relevant and useful for teaching in general and medical terms and English in particular.

**Theme 2. Preparedness of instructors**

Most of the teachers confirm that they are ready to create, and all of them integrate multimedia (infographics, collages, and videos) in an English medical class.

**Theme 3. Multimedia Utilization in the class**

It has been confirmed that the teachers utilize the multi-media (infographics, collages, and videos) in medical English classes.

**Theme 4. Advantages & Benefits of multimedia (infographics, collages, and videos)**

There are numerous advantages of multimedia with special reference to infographics, collages and videos. They make the learning process easier and more interesting. All the teachers confirmed that multimedia (infographics, collages, and videos) is beneficial for the teaching of medical/health English in Saudi Arabia.

**Theme 5. Issues in the integration of multimedia (infographics, collages, and videos)**

Different viewpoints emerge on account of the feasibility and utilization of multimedia (infographics, collages, and videos).

**Discussion**

Data for this study were analyzed using qualitative methods. As research question two was conceived based on the findings of research question one, data were analyzed sequentially. The following findings for both research questions are presented under?
Research Question One: What is the effect of infographics, collages, and videos on the teaching-learning medical English in KSA?

The purpose of this research question was to explore the effect of multimedia (concerning infographics, collages, and videos) on the teaching-learning medical English in KSA. Based on the thematic analysis, it is concluded that the use of infographs, collages, and videos leads to better learning of medical English. Some teachers are ready to create and use multi-media for medical English, whereas others struggle with designing collages and infographics. Hence, the integration of videos can easily be done from different websites. Some expert teachers can create their own videos for teaching effectiveness.

Research question Two: What are the perceptions of English language teachers on the relevance of (infographics, collages, and videos)?

Teachers’ perceptions indicated that they agreed with the idea that multimedia is relevant in the teaching of English. Some of them were more positive towards different media such as infographics, collages or videos. The findings of this paper are consistent with the findings of Khan (2021) who studies the relevance of multimedia with special reference to infographics. They explored that most teachers generally have a positive attitude toward the role and significance of multimedia in English classrooms. Consistent with the findings from a previous study by Alrwele (2017) which contended that infographics improve students’ learning processes. The findings on the effect of collages are in line with the study done by Kannan and Khuri (2018). Similarly, videos are highly effective in motivating learners of medical English. However, in learning English, the findings concerning the impact of video correspond to the findings of Qadha and Alward (2022). This study discovered that concerned teachers had syncretic perceptions towards the use and relevance of multimedia in general. In a modern learning setting, it is no more a thing of surprise that teaching remains monotonous and boring in the absence of active and effective use of multimedia.

The study is qualitative; therefore, a quantitative or mixed study can be undertaken on larger samples to generalise the findings.

Implications

The findings from this research are expected to impact curriculum design in general and ESP in particular. The teaching methods should incorporate a sophisticated blend of traditional and modern approaches, including the blending of technology.

Recommendations

Multimedia can be utilized to teach medical English in KSA to facilitate learners of EFL backgrounds. Multimedia can fill in the gap between teaching and learning consequently leading to better communication and delivery of content. Professors teaching medical subjects such as anatomy and physiology can also try such tools and get better learning outcomes.

Conclusion

The main aim of the paper was to explore the relevance of multimedia (infographics, collages and videos) in the teaching of English. The interview responses proved that infographics, collages, and videos can be effective tools for teaching or learning medical English. Nearly all the
teachers are aware of such tools and are ready to create infographics, collages, and videos. Infographics improve students' learning processes. Collages also enhance the learning process especially vocabulary learning. Similarly, videos are highly effective in motivating learners of medical English. English and ESP teachers participated in the study and perceive that using multimedia in teaching and learning as it makes the class more interesting and interactive. Many Multimedia tools can be employed by English teachers to make the learning process easier and better. English teachers perceived that multimedia enable instructors to deliver content to the target learners in better ways, allowing them to create a more interactive environment which is learner-friendly.

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**Appendices**

**Appendix A**

**Teachers Interview**

1- Why do you think Infographics, collages and videos can be important teaching tools?
2- Can you create simple and instructional infographics, collages and videos if you have software?
3- Do you use these three tools very often in your classes? If yes, why?
4- What are the benefits of Infographics, collages and videos in teaching medical English?
5- Why do you think Infographics, collages and videos enable students to learn complex content in easy ways?
6- Do you face, and if yes, what kind of issues do you face in the integration of multimedia?

**Appendix B**

**Teachers’ Responses**

**Participant-1**

R/Q.1. These are digital media, and these days, students are very fond of such tools which catch their attention.
R/Q.2. Well, I can't create my own, but I can integrate them very well in my class of medical and general English.
R/Q.3. I mostly use videos and infographics. As regards collages, I emphasize when I get an appropriate one.
R/Q.4. The use of these multimedia facilitates learning as these clarify the concept in addition to retaining the interest of the target learners in the classroom.
R/Q.5. These tools are prepared to keep the psychology of the learners as well as the complexity of the content (i.e., medical context), therefore the learners find them interesting and useful.
R/Q.6. Not exactly, there are facilities, resources, and enough background training to integrate multimedia.

**Participant-2**

R/Q.1. This is the digital age, and most of us are attracted towards digital media. Our students also like such tools for many reasons.
R/Q.2. Yes, I can create infographics on my own as I was trained at my university.
R/Q.3. I almost always use videos and sometimes use collages and infographics.
R/Q.5. These tools are somewhat like teaching aids which aim to support the learners in understanding a complex concept.

**Participant-3**

R/Q.1. Technology has been in practice for two decades. In this digital age, students use computers and mobiles to access web materials. If multimedia is used, students may be motivated more.
R/Q.2. Well, I can create collages, but not infographics. Videos are available online that can be utilized for better learning.
R/Q.3. I use videos to provide additional material as an aid for learning medical and general English.
R/Q.4. These multimedia help learners to learn complex concepts easily.
R/Q.5. The theory behind the creation and use of infographics, collages and videos advocate an effective domain of learning. Visuals always affect the cognition process.
R/Q.6. I don't face many issues.

**Participant-4**

R/Q.1. Multimedia is a fascination these days. Our students are also attracted towards such tools.
R/Q.2. Yes, I can't create infographics on my own, but I often use them when needed.
R/Q.3. Videos are a very effective means of teaching. I use them on daily basis.
R/Q.4. Multimedia is an asset these days.
R/Q.5. Infographs, collages, and videos can be integrated easily even if there is no internet connection. In that case, we need to save them in advance.
R/Q.6. Usually issues are encountered, but we overcome them.

**Participant-5**
R/Q.1. Technology has been in practice for two decades. In this digital age, students use computers and mobiles to access web materials. If multimedia is used, students may be motivated more.
R/Q.2. I am not good at creating such tools or media, but I can use them easily as I have been doing for not less than 12 years at King Abdulaziz University.
R/Q.3. Videos are a great help to learners.
R/Q.4. These multimedia make the learning process easier and more interesting.
R/Q.5. This multi-media is designed to keep cognitive and affective factors in view. Thus, they provide learners with a comfortable zone in which self-learning can be easily possible.
R/Q.6. I face problems in making infographs and collages.

**Participant-6**
R/Q.1. Digital media is inevitable these days.
R/Q.2. Yes, I can create infographs on my own as I was trained at my university.
R/Q.3. I frequently use videos and sometimes use collages and infographs as per need.
R/Q.5. These tools aim to support the learners in understanding a complex concept.