EdMedia
create your story

Co-funded by the
Erasmus+ Programme
of the European Union

Work Package 4.1

Development of methodology for educational program designed for positive dual career athletes' image formation through media

Working Document

Edited by

VNIVERSITAT DE VALÈNCIA

(April, 2020)

**Media as a channel of Athletes' Dual Careers promotion and education,
Application Reference Number: 603456-EPP-1-2018-1-LT-SPO-SCP,
Grant Agreement no 2018 -2708/001- 001**

DEVELOPMENT OF METHODOLOGY FOR EDUCATIONAL PROGRAM DESIGNED FOR POSITIVE DUAL CAREER ATHLETES' IMAGE FORMATION THROUGH MEDIA

Document Data

Deliverable:

Project Activity: Work Package 4.1

Activity Leader: University of Valencia

Partners involved: University of Ljubljana, Lithuanian Sports University, European University Sports Association, University of Valencia, European Athlete as Student Network, Alexandru Ioan Cuza University of Iasi, The University of Rome Foro Italico

Distribution level: Partnership

Review by: Peer review or External

Document Version: 0.1 (draft)

Status: For review

TABLE OF CONTENT

INTRODUCTION

Taking into consideration the European Union guidelines, during this work package, we aim to develop an appropriate methodology framework to create the Edmedia online platform for promoting dual career athletes awareness through social media. To achieve this aim, we have divided this document into five different stages.

In the first one, we present the training gathered after analyzing different online universities in order to know the teaching-learning methods they used. Second, once this is known, eight points related to key aspects for the development of online courses are presented. Third, the different tools and activities that can be used in the moodle platform are presented, since it is the one that will develop the online program. Fourth, the draft methodology for the development of the online program is presented. And five, a series of information about how to successfully create educational videos is presented, since it is one of the main tools that will be used in this online program for the promotion of the dual career through social networks.

1. ANALYSIS OF THE METHODOLOGY OF ONLINE UNIVERSITIES

The first step in establishing the methodological framework for the development of the online platform was to carry out an analysis of the teaching-learning methods of different online universities. To this end, four Spanish online universities were analysed. The results are shown in Table 1.

Table 1. Analysis of the teaching and learning methods of online universities.

Name of the online university	Universidad Nacional de la Rioja
Website	https://www.unir.net/
Teaching and learning method	**Live online classes:** There are classes scheduled every day of the week, in the morning and in the afternoon, so that you can attend classes when it suits you best. **Online deferred classes:** If you cannot attend a class or you have doubts, you will be able to access all deferred classes. You will be able to see them whenever you want and as many times as you need. **Personal tutor:** On the first day you will be assigned a personal tutor. You will be in contact with him by phone and email. He or she will support you in your day-to-day life and resolve any doubts you may have. **Virtual Campus:** Everything you need to study at UNIR is on campus: classes, teachers, classmates, library, teaching resources, timetables, chat, forums and much more. **Didactic resources:** You will have access to different learning resources to complete your training: complementary readings, schemes with key ideas, self-evaluation test, etc.
KEY METHODOLOGICAL FINDINGS	

Key ideas: outlines and summaries with the essential information **Master classes, readings** and other interesting resources **Activities:** to put into practice what you have learned **Self-assessment test:** to set contents and review before the exam

Name of the online university	Universidad Internacional de Valencia (VIU)
Website	https://www.universidadviu.es/metodologia-viu/
Teaching and learning method	It is a **competency-based model**: based on the **Competence Based Education (CBE)**, they focus on the development of those skills that will be necessary for the development of the student in the world of work; it is an adaptive model: the organization and sequencing of the didactic programming allows the student greater flexibility to regulate his or her own learning process. It is an **eminently practical model**: spaces are created where students can develop their skills in real time. **It is a shared model:** the work sessions of the student with the teacher and his colleagues contribute to the creation of a learning community where knowledge is built from a global perspective. It is a **flipped model**: for the sake of fostering the autonomy of the student, it proposes the decentralization of learning towards his figure, making him reflect critically on the process and making him responsible for it. It is an **accompanied model**: the teaching role is redefined, turning the teacher into a guide for learning. In addition, new figures are created for personal and pedagogical support, giving the model an even greater value. It is a **professional model:** focusing on the competencies inherent to the performance of the profession contributes to the student having the maximum guarantees for their labor insertion.
KEY METHODOLOGICAL FINDINGS	
Key ideas: e-learning **Master classes, readings** and other interesting resources **Activities**: to put into practice what you have learned (3-4 activities per subjects) **Assessment:** rubrics for essays and exams evaluations	

Name of the online university	Universitat Oberta de Catalunya (UOC)
Website	https://www.universidadviu.es/metodologia-viu/
Teaching and learning method	**Model:** focused on the learning activity and offering a variety of options to adapt to the needs of each student. The model allows students to learn in a way similar to how they work and communicate online.

	Methodology: The model is geared towards participation and the collective construction of knowledge and is open to the students' formative, social and work experience. It is committed to learning that balances individual student involvement and collaboration, and allows the student to enrich themselves with the knowledge, points of view and experiences of peers and to develop teamwork competence for the professional world. Some of the methodologies used to promote this type of learning are: project work, problem-based learning, inquiry learning and agile methodologies. **Tutoring:** The student is accompanied at all times by specialized teachers whose main functions are the design, orientation, dynamization and evaluation of the entire educational process. There are three teaching profiles -teacher, collaborating teacher and tutor-, who work together to ensure a quality learning process. - The teacher designs the subject, ensures quality and coordinates the collaborating teachers. - The collaborating teacher guides and evaluates the students' learning process within the framework of a subject. - The tutor guides the student in the selection of a personalised academic itinerary throughout the experience at the UOC. **Virtual Campus:** The environment in which all these elements come together and enter into a relationship is the UOC's Virtual Campus. The Campus is where the life of the entire university community takes place, made up of students, professors, researchers, collaborating professors, tutors and management staff. Through the Campus, students have access to the virtual classrooms, which are the learning spaces where they will find teachers, colleagues, activities, content and tools for learning. **Learning resources:** The model is also flexible because it is open to the performance of learning activities of very different types, according to the competences being worked on, the field of knowledge or the level of specialisation of the training followed by the student. The resources used in this online program are: - Social tools that facilitate interaction and the exchange of knowledge (blogs, wikis, micro blogs, social bookmarks, etc.). - Multimedia resources that allow to offer contents in an interactive and motivating way, in a combination of elements that include text, audio, image and video.

	- Interactive and multi-format materials such as enriched videos, hypertexts, audiobooks and video books. - Advanced communication systems, both synchronous and asynchronous, that facilitate agile, clear communication adapted to each situation (video chats, forums, video blogs, etc.). - Immersive environments that allow to interact with people and objects simulating real situations. - Agile access to content and training through mobile devices that allow students to learn anywhere and at any time.
KEY METHODOLOGICAL FINDINGS	
Flexible and adapted to students' needs **Methodology used:** project work, problem-based learning, inquiry learning and agile methodologies **Materials used:** Social tools, multimedia resources and interactive materials **Assessment:** mechanism for learning and feedback to the learning process. Evaluation, therefore, is continuous and formative, and formative feedback is provided for continuous improvement of learning. Evaluation activities facilitate the achievement of learning objectives and the development of competences.	

Name of the online university	Universidad Nacional de Educación a Distancia (UNED)
Website	https://www.universidadviu.es/metodologia-viu/
Teaching and learning method	**Model:** "Flexible and at your own pace", allows members to study flexibly, adapting the study to working hours, personal situation, family and professional obligations. **Methodology:** "Active learning", each student is the protagonist of their own learning, under the idea that underlies the European Higher Education Area for the training of professionals capable of responding to the challenges of the Knowledge Society, through innovative didactic materials and quality. **Tutoring:** In Faculties and Schools, teaching teams are responsible for the preparation of programmes and teaching materials, and for evaluating learning. Teacher support is provided by telephone, online, videoconferencing or face-to-face tutorials at Associated Centres. **Virtual Campus:** Each of the subjects has its own space or virtual classroom, the fundamental place where direct contact takes place between the teaching team, the teaching tutors and all the enrolled students, as well as the follow-up of the programmed planning. It allows to follow day by day all the activities proposed by the teaching

	team. In the virtual course the students have the support of the teaching team to resolve all doubts. **Learning resources:** - Career guide. It contains the basic academic and administrative indications necessary to study at the UNED: dates and places of exams, how to contact the teaching team, what are the study plans... - Study guide. Each subject offers a study guide with all the necessary orientations for the best use of the course. The guide is divided into two parts; the first contains the basic information you should know before enrolling, and is on the website of each grade, the second part contains the detailed planning of the subject and is available to students in the virtual course. - Teaching units. The didactic material in the form of a printed book, usually called Didactic Units, constitutes the fundamental instrument for study at the UNED. These units can be complemented with Addenda, Practice Notebooks and Didactic Guides, which guide students in terms of study methods and contents of each subject.
KEY METHODOLOGICAL FINDINGS	
Flexible and adaptable to working hours, personal situations, family and professional obligations. **Methodology used:** encourages the active learning of each student, who are primarily responsible of their learning and are accompanied and supported at all times to train in the human and professional aspects. **Materials used:** teaching units, texts and guides for self-study, digital multimedia materials (podcasts, videos, etc.) **Assessment:** established by the teaching team of each module, based on objective tests, essays, empirical work, case studies, text comments, laboratory and other practices, and also face-to-face tests	

2. ANALYSIS OF THE EXISTING LITERATURE ABOUT SUCCESSFUL TEACHING METHODS

Once, we know the key methodology findings of the online universities previously analysed, we aim to discover what are the most effective methodologies of online courses. To reach this aim, we have performed a search about articles related to the methodology used in online course. After collecting all that information, we have made a list of the key points for the development of a successful online course:

1) MOOCs has attracted the attention in the fields of **higher education (HE), lifelong learning** and **distance education** (Bozkurt, Akgün-Özbek & Zawacki-Richter, 2017).

2) The successful use of e-learning platforms in the teaching and learning context critically depends on **the teachers having knowledge about the tools**, being aware of how they should be used and being capable of organizing all the communication process (Costal, Alvelos & Texeira, 2012)

3) The **design and the contents** are considered as key factors for students in online platforms (Martín-Rodríguez, 2012).

4) In relation to the technological tools used in these platforms, students value positively the **ease of access**, and if they are **visual** (Martín-Rodríguez, 2012).

5) The **relationship between user-platform managers and user-user** is an aspect that students consider essential in this type of platform (Martín-Rodríguez, 2012).

6) Diversity in assessment is also an important aspect (Martín-Rodríguez, 2012; Sun, Tsai, Finger, Chen & Yeh, 2008), and it is important to be aligned with the objectives of the course, and to be a continuous assessment.

7) Course **flexibility** and **quality** are critical factors affecting learners' perceived satisfaction (Sun, Tsai, Finger, Chen & Yeh, 2008).

8) In the interactive condition, participants used the **interactive features** like **stopping, replaying, reversing or changing speed** to adapt the pace of the video demonstration. This is important, due that users of non-interactive video presentations, needed substantially more time than users of the interactive videos to acquire the necessary skills for tying the knots (Schwan & Riempp, 2004).

3. ACTIVITIES AND MODULES OF THE MOODLE PLATFORM

Once, we have analysed the literature, and we have discovered the key point for the development of a successful online course, we have analysed the different tools or activities that could be used in moodle platforms. In the following Table 2, there is a summary of the different tools that are available in this kind of online platforms:

Table 2. Activities and modules of the Moodle platform

ACTIVITY	MODULE	DESCRIPTION
Creation	**Database**	Allows to build, display and search a bank of record entries about any topic
Organization	**Lessons**	represent a set of ordered topics summarizing the instructional materials and allow the access to them through the respective link;
Delivery	**Assignments**	Represent a set of ordered topics summarizing the instructional materials and allow the access to them through respective link
	Workshops	represent a peer assessment activity with many options
Communication	**Chats**	allow synchronous conversation

	Forums	represent a communication tool where students and teachers can exchange ideas by posting comments
	News	represent a special forum for general announcements allow teachers to add posts and to send emails
Collaboration	**Glossary**	allows creating and maintaining a list of definitions represents a mechanism for collaborative activities that can be restricted to entries made by the teacher
	Wikis	allow users to edit collaborative Web pages provide space for collaborative work
Assessment	**Choice**	allows teachers to ask questions and specify multiple choice answers represents a useful mechanism to stimulate thinking about a topic
	Quiz	allows teachers to design and build quizzes with a variety of questions, with different types of answers, such as multiple choice, true/false, short answer
	Survey	allows teachers to gather feedback from students using pre-packaged questionnaires
	Feedback	allows teachers to create surveys to collect feedback
Reusability	**SCORM**	represent specifications that enable interoperability, accessibility and reusability of the learning content represent tools that enable SCORM packages to be included in the course
	External tools	enable interaction with compliant learning resources (eg. Learning Tools Interoperability) and activities on other Web sites, provide access to new activities' types or materials

Source: Costa, Alvelos & Texeira (2012)

4. PROPOSAL OF THE METHODOLOGY DRAFT

Finally, the next step was to establish the draft for the development of the online platform to promote dual career through social media. In this, the objectives, the duration of the program, the structure and the teaching and learning methods are presented (see Table 3).

Table 3. Methodology draft for the creation of the online platform for promoting dual career through social media.

METHODOLOGY DRAFT
OBJECTIVES
The objectives of this educational program are:

<table>
<tr><td colspan="2">

- To shape the positive image of dual athletes sometimes and raise awareness of athletes' dual career
- To teach the athletes how to communicate with media specialist.
- To teach athletes how to use existing social profiles, which media channels to promote their dual career.

</td></tr>
<tr><td>PROGRAM DURATION</td><td>Depending on the contents, but approximately one month. One week more or less per each social media.
As previous authors have highlighted it is very important the flexibility of the courses for users (Sun, Tsai, Finger, Chen & Yeh, 2008). Thus, we proposed not to have very tight deadlines to complete the course. We consider that it would be better if the course is open, and athletes can complete them when consider necessary.</td></tr>
<tr><td rowspan="2">STRUCTURE: We propose to develop three different sections</td><td>1) INFORMATIVE SECTION (IS): TARGET GROUPS, ORGANIZATIONS, SPORTS CLUBS, UNIVERSITIES…</td></tr>
<tr><td>This section will present information about the athlete dual-career, which is of interest to both organizations and athletes. For this purpose, in this section the following sub-sections will be created:
- 1.1. Sub-section with videos of famous athletes from each country to inform and promote the dual-career "Hall of fame". Two videos per each country. The videos will reply the following questions:
- What keys would you highlight to explain your academic and sporting success?
- How do you think social media can help you promote your dual career?
- What are your future prospects after finishing your sports career?
- What advice would you give to all athletes to embark on a dual career?
- 1.2. Short videos to raise awareness of the importance of reporting on the dual career of athletes in social media. Different Videos in which different university managers and media specialist talk about the importance of increasing dual career visibility.</td></tr>
</table>

	- **1.3.** Sub-section to present links to institutions and contacts of interest. Some interesting links to webpages in which people can find more information about dual career in each European country that participate in EdMedia project.
	2) TRAINING SECTION (TS) FOR DUAL CAREER ATHLETES
	This section focuses on educating athletes about their dual career. Specifically, within this section you will find the following sub-sections: - **2.1.** Short videos on how to use different social networks for athletes to promote dual career. In this sub-section three videos will be developed with tips on how to use the following social media: (1) Facebook, (2) Instagram, (3) TikTok, twitter and (4) LinkedIn to increase the visibility of the student-athlete dual-career. - **2.2.** Description of what is dual careera about - **2.3.** Information about conferences or interesting events (in each country), related to dual-career.
	3) INTERACTION (IN) BETWEEN ATHLETES AND ENTITIES
	This section will discuss how to connect elite athletes with institutions to facilitate their dual career: - **3.1.** Social media profile of interest institugions - **3.2**. Social media groups for athletes, institutions, journalist…
TEACHING AND LEARNING METHODS	
Relationship student - institutions	The students´ athletes will be in touch with the institutions mainly though the social media.
Information provided	- Profiles of interest for athletes in the different social media (Instagram, twitter…) - Videos of famous athletes talking about dual career - Videos about the importance of promoting dual career by media (journalist…) - Videos to inform coaches and sport clubs about the dual career - Links to interesting institutions

	- Information about conferences and events - Videos of how to use the different social media
Material used for the "lessons"	We propose to use only **videos**. Previous studies have highlighted that students prefer visual contents (Martín-Rodríguez, 2012). In the same vein, multiple studies have shown that video, specifically, can be a highly effective educational tool (Allen and Smith, 2012; Hsin and Cigas, 2013; Kay, 2012; Lloyd and Robertson, 2012; Rackaway, 2012). Moreover, we propose interactive videos that led the participants use stopping, replaying, reversing or changing speed to adapt the pace of the video demonstration. This led to an uneven distribution of their attention and cognitive resources across the videos, which was more pronounced for the difficult knots (Schwan & Riempp, 2004).
Evaluation methodology	We propose to evaluate the Edmedia Online platform using questionnaires to measure users´perceptions regarding key aspects of the platform. Specifically, we will evaluate the contents and methodology, as well as the usability and usefulness. We will use these scales: • **Understanding fundamental concepts scale:** this scale was extracted from Kember and Leung (2008) and is composed of five items that refer to the contents and concepts that were worked on in the platform. • **Relevance:** this scale was extracted from Kember and Leung (2008). It is also composed of five items that refer to the relevance of the contents and resources used in the platform. • **Organization:** this scale was extracted from Kember and Leung (2008). It is composed of seven items that refer to the organization of the different resources and contents within the platform. • **Motivation:** this scale was extracted from Kember and Leung (2008). It is composed of six items that refer to the interest in the resources used in the platform. • **Generic Skills Scale:** this scale was extracted from Byrne and Flood (2003). This scale is also composed of six items referring to the improvement of skills after using the platform.

	• **Satisfaction with the Platform:** user satisfaction was assessed through three questions: (1) What is your overall satisfaction regarding the contents of the platform?, (2) What is your overall satisfaction regarding the methodology of the program?, and (3) What is your overall satisfaction regarding the usability of the platform? • **Usability:** this scale was extracted from Meiselwitz and Lu (2005). It consists of nine items that assess how easy it was to use the platform, whether they felt comfortable, and whether it had the necessary resources for their learning. • **Perceived value:** this scale was extracted from Floyd, Harrington, and Santiago (2009). It consists of eight items that assess whether the platform has been valuable for learning about the dual career. For this purpose, questions are asked about different resources used within the platform. • **Effectiveness of the online educational experience:** this scale was extracted from Peltier, Drago, and Schibrowsky (2003). It comprises three items that refer to whether they would recommend this platform to other colleagues, whether they had learned with this program, and whether they had enjoyed learning with the platform.

5. TIPS FOR THE DEVELOPMENT OF EFFECTIVE EDUCATIONAL VIDEOS

Finally, since the training part of this course will be based on the creation of videos from each of the chosen social networks, a series of guidelines are proposed below for making educational videos effectively. All this information has been mainly extracted from Brame (2015).

According Brame (2015), there are three elements considered for video design and implementation:

a) Cognitive load
b) Non-cognitive elements that impact engagement
c) Features that promote active learning

a) Cognitive load

Sensory memory is transient, collecting information from the environment. Information from sensory memory may be selected for temporary storage and processing in working memory, which has very limited capacity. This processing is a prerequisite for encoding into long-term memory, which has virtually unlimited capacity. Because working memory is very limited, the learner must

be selective about what information from sensory memory to pay attention to during the learning process, an observation that has important implications for creating educational materials.
There are three components in a learning experience

- Intrinsic load: inherent to the subject under study and is determined in part by the degrees of connectivity within the subject.
- Germane load: the level of cognitive activity necessary to reach the desired learning outcome—e.g., to make the comparisons, do the analysis, elucidate the steps necessary to master the lesson.
- Extraneous load: cognitive effort that does not help the learner toward the desired learning outcome. It is often characterized as load that arises from a poorly designed lesson (e.g., confusing instructions, extra information), but may also be load that arises due to stereotype threat or imposter syndrome.

Instructors should seek to **minimize extraneous cognitive load** and should **consider the intrinsic cognitive load** of the subject when constructing learning experiences, carefully structuring them when the material has high intrinsic load. Because working memory has a limited capacity, and information must be processed by working memory to be encoded in long term memory, it's important to prompt working memory to accept, process, and send to long-term memory only the most crucial information (Ibrahim et al., 2012).

b) Cognitive Theory of Multimedia Learning

Working memory has two channels for information acquisition and processing: a visual/pictorial channel and an auditory/verbal processing channel (Mayer and Moreno, 2003).
Although each channel has limited capacity, the use of the two channels can facilitate the integration of new information into existing cognitive structures. By using both channels, working memory's capacity is maximized—but either channel can be overwhelmed by high cognitive load. Thus, design strategies that manage the cognitive load for both channels in multimedia learning materials promise to enhance learning. In addition to the two key assumptions of dual-channel processing and limited working memory capacity, the Cognitive Theory of Multimedia Learning also articulates the goal of any learning as "meaningful learning," which requires cognitive processing that includes paying attention to the presented material, mentally organizing the presented material into a coherent structure, and integrating the presented material with existing knowledge (Mayer and Moreno 2003).

c) Recommendations about educational videos

Effective learning experiences minimize extraneous cognitive load, optimize germane cognitive load, and manage intrinsic cognitive lead, four effective practices emerge.
- **Signalling (cueing)**: the use of on-screen text or symbols to highlight important information. For example: appearance of two or three key words, a change in colour or contrast or a symbol that draws attention to a region of a screen. By highlighting the key information, it helps direct learner attention, thus targeting particular elements of the video for processing in the working memory.

- **Segmenting**: chunking of information to allow learners to engage with small pieces of new information as well as to give them control over the flow of new information. As such, it manages intrinsic load and can also increase germane load by emphasizing the structure of the information. Segmenting can be accomplished both by making shorter videos and by including "click forward" pauses within a video, such as using YouTube Annotate or HapYak to provide students with a question and prompting them to click forward after completion.
- **Weeding**: elimination of interesting but extraneous information from the video, that is, information that does not contribute to the learning goal. For example, music, complex backgrounds, or extra features within an animation require the learner to judge whether he should be paying attention to them, which increases extraneous load and can reduce learning. Importantly, information that increases extraneous load changes as the learner moves from novice toward expert status.
- **Matching modality**: the process of using both the audio/verbal channel and the visual/pictorial channel to convey new information, fitting the particular type of information to the most appropriate channel. For example, showing an animation of a process on screen while narrating it uses both channels to elucidate the process, thus giving the learner dual and complementary streams of information to highlight features that should be processed in working memory.

5.1. Student engagement

One of the most important aspects of creating educational videos is to include elements that help promote student engagement. If students don't watch the videos, they can't learn from them.

Keep it short: he median engagement time for videos **less than six minutes** long was close to 100%– that is, students tended to watch the whole video. Making videos longer than 6-9 minutes is therefore likely to be wasted effort.

Use a conversational style: the use of **conversational rather than formal language** during multimedia instruction has been shown to have a large effect on students' learning, perhaps because a conversational style encourages students to develop sense of social partnership with the narrator that leads to greater engagement and effort (Mayer, 2008).

Speak relatively quickly and with enthusiasm: student engagement was dependent on the **narrator's speaking rate**, with student engagement increasing as speaking rate increased. It can be tempting for video narrators to speak slowly to help ensure that students grasp important ideas, but including in-video questions, "chapters", and speed control can give students control over this feature—and increasing narrator speed appears to promote student interest.

Make sure the material feels like it for these students in this class: When reusing videos, it's important to package them with text outside the video to contextualize them for the particular class for which they are being used. Further, it's important to create them for the type of environment in which they will be used.

Match modality: When telling a story, it can be very effective to show the **storyteller's face or to show an animation of the story**. When teaching about an invisible phenomenon, it can be helpful

to provide an **illustration**. In each case, providing visual elements that add to the lesson can not only promote student understanding but also engagement with the lesson.

5.2. Active Learning

To help students get the most out of an educational video, it's important to provide tools to help them process the information and to monitor their own understanding.

- Use guiding questions
- Use interactive features that give students control
- Make video part of a larger homework assignment
- Integrate questions into the video

The important thing to keep in mind is that watching a video can be a passive experience, much as reading can be. To make the most of our educational videos, we need to help students do the processing and self-evaluation that will lead to the learning we want to see. The particular way you do this should be guided by goals of the course and the norms of your discipline.

5.3. Summary of the key findings

Videos can be an effective tool in your teaching tool kit. When incorporating videos into a lesson, it's important to keep in mind the three key components of cognitive load, elements that impact engagement, and elements that promote active learning. Luckily, consideration of these elements converges on a few recommendations:

- Keep videos **brief and targeted** on learning goals.
- Use **audio and visual elements** to convey appropriate parts of an explanation
- Make them **complementary** rather than redundant.
- Use signalling to **highlight important ideas** or concepts.
- Use a conversational, enthusiastic style to enhance engagement.
- Embed videos in a **context of active learning** by using guiding questions, interactive elements, or associated homework assignments.

REFERENCES

Allen, W.A. & Smith, A.R. (2012). Effects of video podcasting on psychomotor and cognitive performance, attitudes and study behavior of student physical therapists. Innovations in Education and Teaching International 49, 401- 414.

Bozkurt, A., Akgün-Özbek, E., & Zawacki-Richter, O. (2017). Trends and patterns in massive open online courses: Review and content analysis of research on MOOCs (2008-2015). International Review of Research in Open and Distributed Learning: IRRODL, 18(5), 118-147.

Brame, C. J. (2015). Effective educational videos. Vanderbilt University. Available at: https://cft.vanderbilt.edu/guides-sub-pages/effective-educational-videos/

Byrne, M., & Flood, B. (2003). Assessing the teaching quality of accounting programmes: An evaluation of the Course Experience Questionnaire. *Assessment & Evaluation in Higher Education*, *28*(2), 135-145.

Costa, C., Alvelos, H., & Teixeira, L. (2012). The use of Moodle e-learning platform: a study in a Portuguese University. Procedia Technology, 5, 334-343.

De la Fuente Sánchez, D., Solís, M. H., & Martos, I. P. (2018). Vídeo educativo y rendimiento académico en la enseñanza superior a distancia. RIED. Revista Iberoamericana de Educación a Distancia, 21(1), 323-341.

Floyd, K. S., Harrington, S. J., & Santiago, J. (2009). The Effect of Engagement and Perceived Course Value on Deep and Surface Learning Strategies. *The International Journal of an Emerging Transdiscipline*, *12*, 181-190.

Hsin, W.J. & Cigas, J. (2013). Short videos improve student learning in online education. Journal of Computing Sciences in Colleges, 28, 253-259.

Ibrahim, M, Antonenko, P.D., Greenwood, C.M. & Wheeler, D. (2012). Effects of segmenting, signalling, and weeding on learning from educational video. Learning, Media and Technology, 37, 220-235.

Kay, R.H. (2012). Exploring the use of video podcasts in education: A comprehensive review of the literature. Computers in Human Behavior, 28, 820-831.

Keengwe, J., & Kidd, T. T. (2010). Towards best practices in online learning and teaching in higher education. MERLOT Journal of Online Learning and Teaching, 6(2), 533-541.

Kember, D., & Leung, D. Y. (2008). Establishing the validity and reliability of course evaluation questionnaires. *Assessment & Evaluation in Higher Education*, *33*(4), 341-353.

Korhonen, A. M., Ruhalahti, S., & Veermans, M. (2019). The online learning process and scaffolding in student teachers' personal learning environments. Education and Information Technologies, 24(1), 755-779.

Lloyd, S.A. & Robertson, C.L. (2012). Screencast tutorials enhance student learning of statistics. Teaching of Psychology, 39, 67-71.

Mason, R. (1998). Models of online courses. ALN magazine, 2(2), 1-10.

Mayer, R. E. & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. Educational Psychologist, 38(1), 43-52.

Mayer, R.E. (2008). Applying the science of learning: Evidence-based principles for the design of multimedia instruction. Cognition and Instruction, 19, 177-213.

Meiselwitz, G., & Lu, C. (2005). Questionnaire for Evaluation of Usability and Learning Outcomes in On-line Instruction. In *Proceedings of the 4th European Conference on e-Learning (ECEL 2005): ECEL2005* (p. 253). Academic Conferences Limited.

Peltier, J. W., Drago, W., & Schibrowsky, J. A. (2003). Virtual communities and the assessment of online marketing education. *Journal of Marketing Education*, *25*(3), 260-276.

Rackaway, C. (2012). Video killed the textbook star? Use of multimedia supplements to enhance student learning. Journal of Political Science Education, 8, 189-200.

Schmid, R.F., Bernard, R.M., Borokhovski, E., Tamim, R.M., Abrami, P.C., Surkes, M.A., Wade, C.A. & Woods, J. (2014). The effects of technology use in postsecondary education: A meta-analysis of classroom applications. Computers & Education, 72, 271-291.

Schwan, S., & Riempp, R. (2004). The cognitive benefits of interactive videos: learning to tie nautical knots. Learning and Instruction, 14(3), 293-305.

Sun, P. C., Tsai, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. Computers & Education, 50(4), 1183-1202.