Abstract: Scholars are increasingly expected to share their knowledge through different media besides the written publication but struggle to do so. How might they teach their students the skills to do so? This article argues that Practice as Research, developed by practitioners venturing into academia, provides a useful framework for shaping research outcomes into, for instance, video essays or interactive narratives. It is especially valuable for undergraduate students aiming to increase their knowledge and understanding of media through practical work, as it trains them in both practical and academic skills. This gives Practice as Research an added value in academic media studies curricula. This article is based on a case study of an advanced practical course for film and television students at Utrecht University and relies on course
assignments, feedback conversations, and auto-ethnography. As this article was authored by the course lecturer and two students, it provides insight from multiple perspectives.

Keywords: Practice as Research, self-directed learning, inquiry-based learning, productions studies, auto-ethnography, film practice, interactive narratives

Disclaimer
This article is designed as an interactive narrative. Reading it online will provide an enhanced reading experience. The premise underlying the design is the easy access to the different sections of this article. On each page, images link to the various case study findings while the introduction and conclusion are accessible through textual links. In addition, links in the text quickly provide access to related information, including the theoretical framework and case study design. This pdf version annuls such navigation.

Introduction
This paper argues that a Practice as Research approach has an added value in the curricula of university students studying media. This is based on our case study, which is framed by theories on the relationship between practice and research, on how-to-study practices, and on theories about student learning. Read more...

Theme 1. Learning about content
Theme 2. Complexity and luck
Theme 3. Interactivity: Seducing the user
Theme 4. Working with limitations
Theme 5. Organisational skills
Theme 6. Academic skills

Conclusion
Practice as Research has an added value for university students, which we discuss in relation to the authors’ practice of writing and developing this interactive narrative. Read more...

1 Introduction
How might we best teach university students about media? In a continually converging media landscape, media like “television” and “film” become increasingly diffuse and speaking about them increasingly challenging. There seems to be a gap between what is conventionally understood as film and television and how these are still studied and discussed, on the one hand, and how students experience 21st Century media, on the other hand, including games, social media, and other interactive media. In addition, the role of the university in society is
changing, and applied science and the humanities are moving closer together. These seem symptoms of a second gap, one between academic generations. We think both gaps need to be bridged.

1.1 Alternatives for the Written Argument

Sarah Barrow, discussing the video essay as a viable alternative to written academic output, argues that ‘it is time to normalise alternative ways to publish and circulate ideas.’\(^1\) Thommy Eriksson and Inge Ejbye Sørensen, discussing the video essay as academic output, observe that the ability to write texts is taken for granted in academia. They ask: ‘Is it now time to assume that one should be able to make a video essay?’\(^2\) Considering interactive media as a new generation of media and students as the next generation of professionals, we take this question further and ask: Is it now time to assume that media students should be able to make an interactive narrative? For scholars working within the field of digital media, including archives and the Digital Humanities, in general, the answer should be ‘yes.’ But how do we teach them?

Creating alternative forms of dissemination, such as a video essay, means moving to the practice of (audiovisual) media making. However, the spoken word is our natural mode of communication and writing a long-established form for disseminating knowledge. According to Eriksson and Sørensen, academics are still overwhelmingly used to and familiar with written research output.\(^3\) Although audiovisual output is increasingly accepted in academia, media scholars hardly share their research through audiovisual media.\(^4\) This points towards a practice-theory divide: scholars struggle to make the move to turn into media makers. In addition, written research publications yield academic merit; for other modes of expression, this is often still a hurdle.

Illustrative of this is a platform such as Scalar. It was ‘designed to make it easy for authors to write long-form, born-digital scholarship online,’ but it was initially used for the interactive presentation of scholarly books and articles.\(^5\) It is also visible in the very article you are reading and the platform that supports it. VIEW presents itself as a multimedia journal and explicitly ‘aims at stimulating new narrative forms of online storytelling.’\(^6\) At the same time, most articles consist of written texts interspersed with embedded audio and/or video. They are made available as pdf files, as well, so they need essentially to be formatted according to conventional linear written arguments. We, as authors, struggled to conceptualize another form for this article, grounded as our thinking is in the written tradition. The confinements of the VIEW format amplified this struggle. Given these challenges, using alternatives to the written academic argument, i.e., moving to the practice side of media, is not a matter of course.

1.2 Practice as Research in Undergraduate Education

The practice-theory divide has been more successfully bridged by art practitioners interested in researching their practice. Relying on Practice as Research, they seek to generate new and – more importantly – different knowledge

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2 Thommy Eriksson and Inge Ejbye Sørensen, ‘Reflections on Academic Video,’ Seminar.net. 8, 1, 2012, Introduction.
3 This does not only apply to academia. Art grant applications, for instance, also usually need to be submitted in writing. In the case of film or documentary grants, audiovisual material, such as research footage or prior work, may support the application, but written text remains the main mode for expressing what one wishes to capture in sounds and images.
5 See https://scalar.me/anvc/scalar/features and https://scalar.me/anvc/scalar/showcase.
6 See http://viewjournal.eu/focus-scope/
through practice. Practice as Research has been conceptualized and developed mainly from the perspective of arts practitioners and students and, to a much lesser degree, from the perspective of academics venturing into practice (see, for instance, Borgdorff, and Wilson). Several academics involved with Practice as Research observe that it is treated with hesitation and scepticism as well as disputed by academia. In her recent book, Artists in the University, Wilson states that: ‘It is time to show our colleagues in academia that there are innovative rich-media ways to document, publish, disseminate and evaluate research outcomes.’ But, while academics, including PhD and MA students, are increasingly encouraged to disseminate their research through non-writing media, BA students are seldom mentioned as target audiences for such practices. We argue that Practice as Research helps to bridge the generational media gap discussed above as it both expands students’ knowledge about media and improves their academic skills.

Our argument is founded on our case study of a practical filmmaking course for undergraduate Film and Television Studies students at Utrecht University. Between November 2017 and February 2018, the lecturer-author was involved in this advanced course as teacher, and the student-authors were involved as students. The lecturer decided to have students develop an interactive narrative using a Practice as Research approach. She wished to familiarize them with stories and narratives that were not linear, and increase and diversify their practical skills as well as their conceptual knowledge. The interactive narrative had to address, but not necessarily answer, the research question, leaving space for a variety of ways in which to present research ideas and outcomes.

To understand the added value of this approach, the lecturer-author decided to investigate how students make sense of media “by doing,” and the student-authors volunteered to participate. Self-Directed Learning and Inquiry-Based Learning served as didactic approaches for the course design. This research takes a Production Studies approach. Through assignments, feedback conversations, and auto-ethnography, students reflected and produced documents and artefacts, which then served as research data.

7 Sophie Stone compiled an annotated bibliography and webography of Practice-as-Research-related publications and provides a list of the various terms used to refer to what she calls Practice Research. See http://create.canterbury.ac.uk/16292/1/Practice%20Research%20Bibliography%20and%20Webography%20%2016292.pdf. Craig Batty and Susan Kerrigan likewise observe that there are many different ways to research creative practices but insist that the differences among them are important to consider. Craig Batty and Susan Kerrigan, ‘Introduction,’ in Craig Batty and Susan Kerrigan, eds., Screen Production Research, Springer International Publishing, 2018, p. 2, 6.


10 Wilson, Artists in the University, p. X.

11 Students in Utrecht University’s Department of Media and Culture Studies have the option to take two consecutive practical film-making courses as part of their BA programme in order to familiarize themselves with their future professional practice (many end up working in media production) as well as to make connections between their theoretical understanding of media and media practices. Students from other departments can also take these optional courses. The first course teaches students the conventional basic knowledge and skills of video production. The second offers a deepening of their experience, with a focus on independently developing and producing a media text. A research question serves as the starting point for this project. This article reports on the second course.

12 Hanna Meretoja argues that: ‘There seems to be a relative unanimity that narrative does not merely list what happens, but that it brings out or creates meaningful connections between events or experiences, thereby rendering them (at least partly) intelligible’ (p. 89) Tuffield, Shadbolt, and Millard, with reference to Mieke Bal’s work, discuss three layers of a narrative: the Fabula, which represents the raw chronological events; the Story, where given a fabula one could derive a number of different stories, and at the third and highest level the Narrative. The narrative is said to be the final form of the rendered material (p. 2, italics in the original). Sanders and Hagedoorn discuss the challenges researchers face when conceiving a digital presentation of their research results. They conclude that questions of visibility and user agency and the kind and amount of research materials are related to different goals authors might have for their presentations. Based on the above, we use the term narrative here to refer to the text as a composition that is related to the goal the author has with the presentation and that is meaningful with respect to the research question. Hanna Meretoja, ‘Narrative and Human Existence: Ontology, Epistemology, and Ethics,’ New Literary History, 45, 1, Winter 2014. Mischa M. Tuffield, Nigel R. Shadbolt, and David E. Millard, ‘Narrative as a Form of Knowledge Transfer: Narrative Theory and Semantics,’ 1st AKT Doctoral Symposium, Milton Keynes, UK, 2005. Willemsen Sanders and Berber Hagedoorn, ‘Tell and Show: Developing a Tool for Online Publication of AV Research,’ International Association for Media and Communication Research (IAMCR), Montreal, Canada, 2015.
We analysed these data through a thematic analysis,13 then, in tandem with the students, we designed an interactive narrative for this article. The premise underlying the design is the easy access to the different sections of this article. On each page, the images give access to the various findings, while the introduction and conclusion are accessible through textual links. In addition, links in the text quickly provide access to related information.

2 Theory

2.1 Practice as Knowledge

Recent debates point to the complexity of understanding practical knowledge.14 Robin Nelson argues that, apart from “factual” knowledge, there is another kind of knowledge: the knowledge of how to do things. This knowledge is not always transferable through human communication; it is the knowledge gained through doing.15 He defines Practice as Research as ‘a research project in which practice is a key method of inquiry and where, in respect of the arts, a practice ... is submitted as substantial evidence of a research inquiry.’16 In Practice as Research, the practice is both a method to produce knowledge and the outcome of such knowledge.

Practice as Research challenges the hierarchy of theory and the written word over practice and praxis (which Nelson explains as theory imbricated within practice).17,18 Desmond Bell distinguishes between two approaches to combining practice and research, both unsatisfactory: sub-positivism, in which ‘empiricist rhetoric’ is combined with corporate rationality for the benefit of recognition and funding; and romanticism, which ‘privileges the expressive’ and does little for knowledge production.19 Drawing heavily on David Davies,20 Bell argues that understanding art as research demands an understanding of the process and conditions of art production.21

Practice as Research is less established in the Netherlands than in other countries, such as the United Kingdom and Australia. Leiden University collaborates with the Royal Conservatoire and the Royal Academy of Art in The Hague to offer, amongst others, ‘research in and through artistic practice.’22 Leiden University also collaborates with the Willem de Kooning Academy in Rotterdam on the project ‘Bridging art, design and technology through Critical Making.’23 At Utrecht University, researchers from the Media Studies department have only recently begun to develop a collaborative project comparing Practice as Research across disciplines. However, Practice as Research is used in various courses in the department, especially in the context of game studies.

17 Nelson, Practice as Research in the Arts, p. 33.
18 Nelson, p. 82.
19 Desmond Bell, ‘Creative Film and Media Practice as Research: In Pursuit of That Obscure Object of Knowledge,’ Journal of Media Practice, 7, 2, 2006, 93.
21 Bell, ‘Creative Film and Media Practice as Research,’ p. 97.
22 ‘ACPA - Academy of Creative and Performing Arts,’ Leiden University.
2.2 Practice as Research, Praxiography, and Production Studies

Bueger and Gadinger’s term praxiography brings praxis and ethnography together as it refers to practice theory-driven research. Ethnography is characterized by a variety of methods for data gathering, including, amongst others, observation, participation, interviews, and diaries. Based on their evaluation of Bourdieu’s “field of practice” and Wenger’s “community of practice,” Bueger and Gadinger discuss four basic techniques for praxiography: observation, learning practices (understood as a form of participant observation), talking about practices, and reading (text analysis). These four methods are not unfamiliar to a Production Studies approach, which might include the use of observation, interviews, and production- and industry-related artefacts.

Studying the production of audio-visual media, John Caldwell argues that, by speaking about their practice, either in conversation or in the form of professional documents and artefacts, media practitioners self-theorize about their profession. By reflecting on their work and explaining “how it’s done,” they implicitly develop theories about their profession. Practice, in other words, is a different way of developing knowledge. This embodied knowledge precedes theoretical knowledge. Nelson refers to this perspective as an ‘insider account,’ providing a fuller understanding of the practice. Bell sees the educational context as the usual site for practice-based knowledge production.

The above serves to argue that a Practice as Research approach to our practical course aligns well with a Production Studies approach to researching students’ practices. Assignments served both didactic purposes, including reflection and research purposes, as they produced data. When this produced conflicts of interests, the teacher prioritized didactic purposes.

2.3 Self-Directed Learning

Brookfield argues that Self-Directed Learning means that the student, herself, conceives, designs, conducts and evaluates a learning project. Hence, the student is fully autonomous in her learning effort. However, the support of peers, experts, relatives, and other people close to the learner is of major importance to the learning effort. Thus, “self-directed” does not equal “in isolation.”

There are various ways in which educators can help learners in their Self-Directed Learning efforts. These include helping gauge the learning resources; designing a plan; giving direct instructions, if requested; guiding and mentoring group learning activities; and evaluating learning.
Brookfield sees Self-Directed Learning as an emancipatory learning strategy, despite the highly controlled and regulated society in which it takes place.\textsuperscript{33} This understanding of Self-Directed Learning aligns well with the intention of this practical course and was, therefore, adopted as a general approach.

\subsection*{2.4 Inquiry-Based Learning}

According to Hobbs, the pedagogy of inquiry should be central to media literacy in order to critically question media texts.\textsuperscript{34} In today’s media environment however, media literacy involves both the consumption and production of media texts. Inquiry might, therefore, also be central to teaching film making. Inquiry-Based Learning is oriented around the exploration and investigation of a problem, authentic inquiries using contextualized and situated learning, and a research-based approach.\textsuperscript{35} Relying on earlier work by Hmelo-Silver, Golan Duncan, and Chinn, Blessinger and Carfora argue Inquiry-Based Learning includes gaining epistemic knowledge (knowledge of the subject matter) as well as epistemic practices (knowledge of how to do things).\textsuperscript{36} Therefore, it seems to align well with a Practice as Research approach.

\subsubsection*{2.4.1 Collaboration}

Collaboration is a key aspect of Inquiry-Based Learning.\textsuperscript{37} The premise is that learning is most effective when learning happens in a ‘socially participatory way,’ i.e., through collaboration.\textsuperscript{38} According to Blessinger and Carfora, mentors/educators are involved in the process, but students take increasing responsibility for their learning.\textsuperscript{39} This freedom is related to the responsibility of making informed decisions about such choices with respect to resources, actions, and skills.\textsuperscript{40}

\subsubsection*{2.4.2 Scaffolding}

Hmelo-Silver, Golan Duncan, and Chinn argue that scaffolding can ‘reduce cognitive load, provide expert guidance, and help students acquire disciplinary ways of thinking and acting.’\textsuperscript{41} Hmelo and Guzdial distinguish between black-
box scaffolding and glass-box scaffolding. The former is aimed at the restriction of options to make tasks accessible and manageable, not at learning.42 The latter helps students learn but should disappear as the process progresses.43

2.4.3 Documentation

Both Nelson and Bell stress the role of documenting practice to produce what the former refers to as ‘evidence’ in order to make tacit knowledge production explicit.44 To assess the gains of Practice as Research, in Nelson’s view, ‘documentation is integral to articulating and evidencing the research inquiry.’45 He advocates the use of a variety of means to do so.46 According to Bell, a form of auto-ethnography is most suitable.47 This brings us back to Praxiography, Production Studies, and the use of ethnographic methods.

2.5 Interactive Narratives

Nelson advocates making reading a part of the learning process of Practice as Research from the beginning in order to create resonance between theory and practice.48 Students in the course discussed here were introduced to interactive narratives through literature on interactive documentaries (i-docs). Eriksson and Sørensen mirror academic video with documentary film to claim its validity: both have the intention to disseminate knowledge.49 We would also argue that research underlies both, despite documentary’s association with unmediated reality. This makes documentary a good starting point.

Initially, i-docs were discussed in terms of technology. Choi, for instance, conceptualizes i-docs as technological processes that link media fragments together in order to form a narrative.50 Gifreu includes considerations of the user, arguing that i-docs are ‘interactive applications, on or off-line, made with the intention of representing reality with its own mechanisms that we can call modes of browsing or interaction, relative to the level of participation allowed.’51

Alternatively, Aston and Gaudenzi, put the user in the centre, conceptualizing interactivity as ‘a means through which the viewer is positioned within the artefact itself...’52 Focusing on the physical dynamics between spectator and digital artefact, they propose four modes of interactivity. In the controversial mode, the user is allowed to navigate freely through a narrative by interacting with or “being in conversation with” the computer. In the hypertext mode, users can explore a closed archive consisting of linked videos. The participative mode, made possible by the Web 2.0, counts

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42 Hmelo-Silver, Duncan, and Chinn, p. 102.
44 Bell, ‘Creative Film and Media Practice as Research,’ p. 90; Nelson, Practice as Research in the Arts, p. 98–99.
45 Nelson, p. 72, italics in the original.
46 Nelson, p. 87.
47 Bell, p. 99.
48 Nelson, p. 76.
49 Eriksson and Sørensen, ‘Reflections on Academic Video,’ Academic Video Essays and Documentary Theory.
52 Judith Aston and Sandra Gaudenzi, ‘Interactive Documentary: Setting the Field,’ Studies in Documentary Film, 6, 2, June 2012, 126.
on users to participate in creating an open and evolving content database. Finally, the experiential mode focuses on the physical presence of the user, challenging the user’s senses and perception of the world.53

Whereas the authors discussed above look at the workings of interactive texts, Lachman focuses on the design of such texts as experiences. Relying on the 5 E’s model of experience design used by Conifer Research, he discusses user-related considerations which are (or should be) involved when developing interactive narratives. The model includes Entice to lead audiences to interactive narratives, Enter to start the interactive experience, Engage for actual interaction with the content, Exit for the way the experience ends, and Extend for users to share or revisit the online interactive experience.54 The 5E’s model was used in the course discussed here to stimulate students to consider its aspects for their own narratives.

2.6 Course Design

The course was designed as a Practice as Research project, using Self-Directed Learning and Inquiry-Based Learning as didactic approaches. Documentation of the process of enquiry and production was used to ensure reflection on the process and produce research data on students’ learning. Students collaborated in teams.55 Collaboration was supported through a number of feedback sessions in which students commented on each other’s work.

Students were given complete freedom in the choice of subject, research question, and research approach, as long as they translated their research findings into an interactive narrative. Preliminary scaffolding was offered through an introductory lecture during a preceding practical course, a visit to IDFA’s Doc Lab, and a Master Talk by Jonathan Harris.

Glass-box scaffolding56 focused on providing knowledge and reflection on existing interactive narratives, specifically interactive documentaries, to familiarize them with some of the questions about interactivity they needed to consider. These questions included the function and goals of interactivity and the different kinds of interactivity.57 A lecture and assigned readings at the very beginning of the practical course were used to furnish this. Some of the readings were also needed for assignments, which refreshed students’ consideration of theory in relation to their practice. Feedback was generated during seminars.

Black-box scaffolding58 focused on providing existing technologies (tools and platforms) with which to create their narratives. Students were offered a number of tools and platforms with which to create their interactive narrative, including Dreamhost, Korsakow, Omeka, Scalar, Twine, and Word Press.59

Students were made responsible for a number of scheduled seminars in order to be able to schedule an activity or meeting based on their needs at the moment.60

55 Although the set-up was to create teams of 2 or 3 students, a number of students immediately decided they wanted to work in larger teams to be able to film themselves. In the end, they formed four teams (consisting of six, five (2 teams), and two students).
58 Hmelo and Guzdial, p. 130.
59 Eventually, two groups decided to work with yet another tool, Eko Studio. Three groups used Word Press to present their projects and another switched to Scalar after discovering that Word Press held too many limitations for their needs.
60 Efforts to arrange for a guest lecture were unsuccessful.
3 Case Study

3.1 Projects

The four projects researched and their taglines were:

- Detective Brouwer and the Death in Dreamscape: Help the detective find out who killed Victor van Straaten.
- EDMOP: A day as an intern at the production company ‘Ohelo Papa.61
- Top of Nederhop: An analysis of Dutch Hip Hop video clips from start to present.
- Ned Doc Style: Learn all about Dutch documentary makers and their way of working at NED Doc Style!62

3.2 Data

The data include three writing assignments, a presentation, two feedback conversations, and two auto-ethnographic accounts.63 Assignments documented students’ work and progress and substantiated their choices and decisions. They were aimed at facilitating reflexivity, including self-reflexivity, as reflexivity is an important aspect of learning. (See the Appendix for a description of the assignments in this course.)

During seminars as well as outside of the classroom, and often spontaneously, the teacher and students met to discuss the progress of students’ work, the challenges they faced, and to give feedback where needed and/or desired. For each team, two of these conversations were audio recorded: one on 29 November 2017 and the other on 10 (1 group) and 12 (3 groups) January 2018.

As a form of auto-ethnography, the two student-authors, involved with different teams, reflected on their experiences and learning throughout the process. They created testimonies through photos and audio clips detailing their project activities and voicing what they learned. This way, we tried to create a deeper insight into individual learning.

3.3 Thematic Analysis

To analyse the wide variety of data, we relied on thematic analysis, as described by Braun and Clarke.64 This method is flexible and allows for the inclusion of a variety of data. Considering the research question, the analysis focused on students’ reasoning about their experiences and learning: their arguments for preferring one thing over another, for

61 EDMOP is an acronym for Een Dag Met ‘Ohelo Papa (A Day With ‘Ohelo Papa). ‘Ohelo Papa is Hawaiian for strawberry and the name of the students’ production company.
62 Some of these projects include materials subject to copyrights. Because students did not have enough time to clear those rights, not all projects are publicly accessible. In another course at Utrecht University, the problem of copyrights in relation to online archives is addressed. See Van Gorp and Kiewik for this special issue.
63 To familiarize students with interactive narratives, the lecturer-author gave a guest lecture in the preceding practical course in which she discussed two topics: defining interactive narratives and forms and functions of interactivity. In this practicum, students collaborated with the Amsterdam-based children’s Film, Television, and Digital Media festival Cinekid. Their final assignment consisted of creating a portrait of an (international) filmmaker or actor involved in one of the festival’s premiering films. As a preparation for the practical course, students were also assigned to visit Cinekid’s MediaLab, its ‘interactive, digital playground,’ and to devise an alternative narrative for their final assignment, asking themselves how they might design their final assignment with the MediaLab as the exhibition space. Both the guest lecture and this assignment were intended to get them thinking about non-linear, interactive media narratives. These data did not become part of the research data because they were not part of the current course and because we had limited time to analyse and, hence, needed to make a selection.
what does and does not work, and for the choices they made for their own productions. We avoided including merely descriptive remarks.

The analysis started with open coding of the data by the lecturer-author. She started with data gathered early in the process. Later on, the two student-authors became involved as well. The coding system used at that moment was shared to give them a kick-start and promote cohesion. The main researcher synthesized the various analyses.

For most students, this was their first extensive encounter with interactive narratives. Their learning process was based on what they had read and experienced through existing projects and their own work. It is hard to actually pin down what students learn. For this research, we assume that, apart from what students mentioned explicitly, what they deemed important and what they appreciated or disliked is also understood as part of the learning output. Students’ identities have been anonymised for the purpose of confidentiality.

4. Results

4.1 Theme 1. Learning about Content: Interactive Detectives, Suspense Techniques, and Documentary Styles at Work

The figure above illustrates the initial design of the interactive narrative Detective Brouwer and the Death in Dreamscape. The research question for this project was: How does one build a narrative structure for an interactive detective? The main challenge revolved around the user selecting the order of interrogation of the suspects. The team discussed the need to ‘nail it’ with respect to causality and the need for credibility in the development of the story. The initial interactive structure was subsequently completed in Eko Studio (see Figure 2).

![Diagram](image-url)  

Figure 1. Initial narrative structure for the Detective Brouwer project. C, F, and P are the initials of the three suspects. Numbers represent different scenes. The black vertical lines indicate scenes independent of users’ choices. ‘Wie heeft het gedaan?’ means ‘Who has done it?’

65 We refer to sources, as follows: S=student, T=team, followed by A=assignment, FB=feedback conversation, AE=auto-ethnography.
66 T1-FB1
The students used Porter Abbott's concept of focalization to conceptualize the user as the focalizer and detective Chris Brouwer as her stand-in within the diegesis.⁶⁷ They used surprise, suspense, and delay to create the story and keep the user involved.⁶⁸

The EDMOP project addresses the workings of various cinematic techniques to create suspense. Team members relied on theories about filmmaking and suspense for their own project. This refreshed their knowledge and developed their critical skills: "Through literature and the production process, we became more aware and more critical about the supply of information, dialogue, framing, and music in suspense films."⁶⁹

The research question for the Ned Doc Style project was: What are the stylistic characteristics of the oeuvres of three important Dutch documentary filmmakers? They studied Nichols’ documentary modes to analyse documentary styles.⁷⁰ In the oeuvres of three ‘leading’⁷¹ Dutch documentary filmmakers, the students found characteristics which they elucidate in their project and used as inspiration for their own short films. For instance, with reference to Bert Haanstra’s work, they learned rhythmic editing:

Video 1. Video Nederland Fietsland by the Ned Doc Style team, inspired by Bert Haanstra’s work. Go to the online version of this article to watch the video.

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⁶⁸ Kristin Thompson, Breaking the Glass Armor: Neoformalist Film Analysis, Princeton University Press, 1988, p. 62. The stair step construction (iterations of suspense and delay, Thompson, p. 62) proved unfeasible for this project because of its limited length.
⁶⁹ T2-A4
⁷¹ T4-A4
With respect to Heddy Honigmann’s work, the student-author involved expressed the learning experience:

Audio 1. Reflection by the Ned Doc Style student-author on learning about Honigmann’s style. Go to the online version of this article to listen to the audio.

The research question for the Nederhop project was: How have the visual aspects of video clips of Nederhop artists developed in the period 1995-2017? Specifically, mise-en-scene (amongst others, props), gender representation, and cinematography seemed relevant. Team members mentioned learning both about the visual style and Dutch hip hop, in general: pioneers, such as Osdorp Posse, and Extince, paved the way for contemporary artists, such as Ronnie Flex and Lil’ Kleine.

The examples above illustrate both Blessinger and Carfora’s epistemic knowledge and epistemic practice as students learned both with respect to their research questions and media creation.

### 4.2 Theme 2. Complexity and Luck

The images above reflect the most challenging scene in the Detective Brouwer project. While rehearsing their shot list, the team discovered the difficulties of translating a film script and shot list into an actual film. In the script, three

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characters are talking whilst seated around a table. They would all be shown in close-up, utilizing a pan and a focus pull. In order to film this, the students had to remove the table altogether. The student-author involved voiced this as a learning experience about perspective and the way framing and editing create the illusion of space:

Audio 2. Reflection by the Detective Brouwer student-author on learning perspective.\textsuperscript{74} Go to the online version of this article to listen to the audio.

The Ned Doc Style team, while creating their own work, learned about the role of luck in documentary production: ‘... it’s more a matter of luck… There is a lot of waiting to strike at the right moment to get the desired images,’ commented one.\textsuperscript{75} In addition, the Ned Doc Style team learned about the complexities of arranging access to archival material and copyrights.

The inquiry-based learning approach confronted students with everyday problems that may arise during film production, for which they often found their own solutions, which supports the benefits of self-directed learning. It also confronted them with the epistemic boundaries of media theories, as many issues were context specific.

### 4.3 Theme 3. Interactivity: Seducing the User

The goal of the Nederhop team was to make their project attractive to a broad audience. They discussed how to use a homepage most effectively to introduce the site and its navigation (see Figure 4). The team sought inspiration from a web shop template because this allowed them to make the content available in a way that was easy to understand (via a timeline) and navigate (by scrolling). In addition, they created their own visualisations of their analyses using Canva because it allowed for simplicity in the design (see Figure 8).\textsuperscript{76}

The Nederhop project reflects students’ appreciation for projects in which they could freely explore the content themselves. Limited interactivity was dismissed as ‘passive,’ ‘boring,’ ‘not very user friendly,’ and ‘lacking variety.’\textsuperscript{77}

![Figure 4. Home page of the Nederhop project (excerpt).](image-url)
Figure 5. Visualisations of the analysis of two Nederhop video clips, including YouTube views and charts listing, gender representation, camera use, framing, and shot length.
Conversely, an overload of content might encourage ‘skipping’ content or discourage users. With respect to existing interactive projects, one student mentioned that aesthetics are important, as well: a pleasant design supports immersion, a non-‘gripping’ design caused her to lose interest.

The Detective Brouwer team aimed to connect to users’ knowledge of the detective genre in a clear, visual style. They initially described it as: ‘... simple, no bright colours or aggressive movements, ... just a few photographs on a wooden table. This should make sure the user is not daunted and gets into the mood for a classic detective.' Figure 6 illustrates this.

Addressing the user directly or requesting her to respond to a question worked in terms of students becoming engaged in a project. The freedom to ‘choose your own adventure,’ providing agency over the narrative, was the founding principle of the Detective Brouwer project. The EDMOP project followed a similar logic. Team members were primarily interested in investigating the consequences of user choices and reciprocity: ‘When interactivity does not influence the experience of the user, in my opinion, there is no added value to the product,’ said one. In their own project, the user is drawn into the narrative, as it progresses through her choices as an intern, making decisions and being presented with the results. For instance, users choose between scenes shot in long shots or close-ups (see Figure 7).

![Figure 6. Home page (left) and still from the opening sequence (right) of the Detective Brouwer project.](image)

![Figure 7. Scene from the EDMOP project. Different versions of the short film Keel (Throat) based on the user’s choice of long shots (left) versus close-ups (right).](image)

78 S18-A1
79 S15-A3
80 T1-A4
81 The text reads: Detective Brouwer and the Death in Dreamscape. Help the detective to find out in 25 minutes how Victor van Straaten died. Choose with whom he talks and when and reveal a shocking truth. Click here to start the investigation.
82 S6-FB1
83 S16-A4
Students also related interactivity to prolonged involvement through revisiting the experience. Revisits result in an ‘optimal use’ of the project, considered one. Through their engagement with existing interactive narratives, resulting in epistemic knowledge, students learned to consider the relationship between design, interactivity, and user involvement and used this in the development of their own projects, resulting in epistemic practice.

4.4 Theme 4. Working with Limitations

Audio 3. Reflection by Ned Doc Style student-author on learning from working with limitations. Go to the online version of this article to listen to the audio.

As the above audio clip from one of the student-authors illustrates, the black-box scaffolding that dictated the time limit for the project encouraged the Ned Doc Style team to come up with a project that was both informative and manageable. Thus, the team decided to limit their project to three Dutch filmmakers. They also limited the number of films from each oeuvre, asking themselves: ‘What can we achieve in this short period of time?’ As the audio fragment illustrates, this meant sometimes ‘cutting the knot’ in order to proceed and keeping the analysis feasible, but also adapting the design according to the technology and knowledge thereof available.

Due to technical limitations, the Ned Doc Style team was forced to abandon their original platform, Word Press, and turn to Scalar. After encountering limitations there, as well, one student taught herself some coding to be able to include images the way she wanted. She concluded: ‘By learning to make the best of what you’ve got, you can still be quite pleased with the result.’

The EDMOP team initially considered creating a virtual reality project but quickly realized this would be impossible. Thus, they ‘decided to first look at the practical possibilities and tune [their] research question, accordingly.’ Wanting to create an interactive film, they considered providing the user/intern with four decisions: a challenging, but feasible amount, production-wise. They concluded that the process had been a ‘… search for a balance between materials, possibilities, ideas options, and the end product that we envisioned.’

A similar efficiency also marked the work of the Nederhop team. They aligned the number of video clips to analyse with the course’s workload. Also, they chose existing technology, Word Press and Canva, to match their needs because they were free and easy to use. As a consequence of choosing these technologies, there were limited options with which to moderate and adapt the web pages. The team learned to work their way around this and still achieve navigation suitable to their original idea.

84 S15-A3
85 T1-A4
86 S4-AE
87 S17-AE
88 S15-A4
89 T2-A4
90 T2-A4
91 T3-A4
The above shows how black-box scaffolding encouraged continuous consideration of the limited length of the course and resources available for the project. At the same time, it illustrates how students in self-directed learning projects find their own solutions.

The Detective Brouwer team chose to ignore partly the given time restraints. From the start, they struggled to align their plans and ambitions with the resources available. A number of setbacks caused delays to an already ambitious plan. However, their enthusiasm made them reluctant to take short cuts to save time if they felt this would jeopardize the quality of their project. As a result, their project was finished only about a month after the original deadline.

4.5 Theme 5. Organisational Skills: Planning and Team work

Audio 4. Reflection by the Ned Doc Style student-author on the importance of planning. Go to the online version of this article to listen to the audio.

The audio clip above illustrates how crucial planning was for the projects. The Ned Doc Style team consisted of just two students, and the collaboration was mostly smooth as the division of tasks went 'naturally.' Team members

92 Finding a filming location proved to be very hard in Utrecht. Weighing the options (time, money, logistics), they found an alternative in Rhenen (50 km further east). Seeing the temporal limit of the project, the team decided to create the decoupage without any knowledge of this new location, causing the project to take up even more time, as it had to be corrected later on. As to not get too far behind, the decoupage was done without knowledge of this new location. The team also lacked time to meet the actors in advance, so they did not have the luxury of making sure they were adequate. Indeed, one actor ended up interfering a lot in the filming process. Some actors did not know their lines and having to prompt actors’ lines caused a challenge in the editing: ‘A lot of time is spent on efforts to string together these shots.’ (S4-A4)

93 S17-A4
discussed their plans regularly, were aware of each other’s activities, and exchanged roles and tasks in order ‘to not get stuck.’

They relied on a firm schedule, adjusting it when needed to make sure they could execute and finish their project, ‘... while the amount of work could easily have be designated to four people.’

For the Detective Brouwer team, the project proved a major exercise in teamwork and collaboration. The collaboration, in general, was smooth and careful: for instance, the team met for pre-production on location in order to test for shooting the next week. During filming, due to the setup on location, one member more or less took over the role of another, which caused some confusion. The latter decided to not address this immediately in order to not disrupt the process. In the evening, the team sat down for a ‘healthy discussion’ to find a solution. As a result, they re-allocated duties. Members reported appreciating the possibility of communicating openly and address and discuss issues in the team. The student-author involved related this explicitly to filmmaking and life, in general:

Audio 5. Reflection by the Ned Doc Style student-author on the importance of open communication. Go to the online version of this article to listen to the audio.

As their project did not involve film production, the Nederhop team members each had different tasks, which they worked on at home. A clear overview of what everyone was doing was needed in order to obtain a coherent end product. The same was true for the EDMOP team. It consisted of students with different studies, backgrounds, knowledge, and experiences. This led to some anxiety about sharing tasks. Geographical dispersion during the holidays caused communication to go somewhat awry. Team members stated that clear and open communication, as well as honest feedback about a person’s work or workflow, was essential for a functional group.

As the above shows, through the collaborative production of film and research, students learned how important it is to address communication problems and be on the same page. They practiced their organisational skills, as well, which was part of their epistemic practice.

4.6 Theme 6. Academic Skills

Audio 6. Reflection by the Ned Doc Style student-author on developing a research question. Go to the online version of this article to listen to the audio.

In the audio clip above, one of the student-authors reflected on how to deal with research questions. She and her Ned Doc Style partner focused on watching a number of documentaries and formulating a research question before starting their analysis.

In their enthusiasm, the EDMOP team worked the other way around and jumped right into the making process. Peer feedback told them that they were well on their way to finding literature, but the team found they postponed studying it. They concluded that if they had started reading literature earlier on, then they would have been able to work more accurately, and elaborate the research question and visualize the elements they chose to focus on better.

The EDMOP team, from the outset, aimed to share knowledge with users about how film techniques work to create suspense. According to one member, this related to the goal of interactive documentaries: ‘An i-doc or interactive
narrative, in my opinion, should be designed so that the user can pick up something and can leave the narrative with more knowledge..." The team decided to share knowledge by providing background information about different professional roles, such as the producer and director, and making the theory about the techniques, themselves, available, the latter optional, not required. They aimed to playfully inform the audience, considering ‘that we would achieve our goal most effectively when we would give them a say and show them the effect of this immediately.”

For the Detective Brouwer team, the goal of the project was teaching the user to consider the relationship between information received and subsequent inferences. The team was more interested in having the users (re)consider their choices than in finding out who the alleged murderer was. In their reflection report, they argued: ‘By generating doubt in the very last scene about whether they chose the right culprit, we want to explain that choices are affected by perception…”

The Nederhop team argued otherwise, even though they also explicitly wanted to convey knowledge to a broader audience, including a less-educated audience. The team considered putting theory about the research in their project irrelevant for most users and a ‘threat’ to their interest. When the lecturer suggested the option to crowd source the analysis, the team argued that they were wary of letting lay people add information because they might not take it seriously enough. Instead, the team decided to safeguard academic quality but visualise research results to address specifically a broad audience. One team member also related the chronological ordering to a target audience, whom he thought would appreciate the overview and feeling that an exploration was completed.

A number of students practiced their analytical skills. One student mentioned that ‘Thanks to this project, I can now execute a semiotic analysis. Now I will be able to critically analyse visual content.’ As this method was the team’s choice, self-directed learning brought her to this point.

Through their Practice as Research projects, students developed a number of academic skills, including developing a research question, the use of theory, and the analysis and dissemination of academic knowledge. This makes Practice as Research useful specifically for academic students.

5 Conclusion

In the practical film-making course discussed in this article, students followed a Practice-as-Research approach to investigate a media-studies-related research question and present their findings in an interactive narrative. Relying on self-directed learning and inquiry-based learning approaches, students received scaffolding in the form of a lecture, a tour of IDFA’s DocLab, and a Master Talk by Jonathan Harris, as well as assignments and feedback conversations. The latter two and auto-ethnography by two students served as data for this article’s case study, following a Production Studies research approach.

The Practice as Research course yielded both what Blessinger and Carfora refer to as epistemic knowledge and epistemic practice; it resulted in learning about content and in learning media practice. In terms of content, the students learned about narrative techniques related to suspense films, the visual design of Dutch hip hop videos,
different documentary film styles, and the forms and functions of interactivity. In terms of practice, they learned about the everyday challenges in filmmaking, be it fiction (including challenging scenes) or documentary (waiting for the right shot). Many of these challenges are too specific to teach on a theoretical level, and they show the epistemic boundaries of theory and the added value of Practice as Research.

Based on their evaluation of a number of interactive narratives, students learned to consider how to speak to users to seduce them into their own narratives, both in terms of interactivity and interface design, while also managing users’ expectations. In addition, they learned what it means to work with limited resources and around some of these limitations (or ignore them). They also gained experience in organisation and teamwork. Here, their practical knowledge was expanded.

However, students also expanded their academic skills, including analytical skills. Most notably, they explicitly aimed to teach audiences, thereby developing dissemination skills. While Nelson’s definition of Practice as Research focuses on practice as method and outcome, our results suggest that Practice as Research also supports the development of academic skills. This makes Practice as Research an added value for media students wishing to gain practical experience in relation to theory.

In this course, the self-directed and inquiry-based learning strategies worked well. Outside of the confines of rather strict academic guidelines, students are not afraid to develop ambitious projects and come up with creative solutions and expressions. The glass box scaffolding seemed to have worked well to introduce students to new narrative forms. The amount of black box scaffolding could be increased by introducing the various tools and platforms to students in the form of an intensive workshop rather than in the brief tutorial given this time.

For the student-authors, being involved in this project meant being in the twofold position of both reflecting upon the course from the inside – doing their Practice as Research projects - and the outside – studying Practice as Research projects – which added a dimension to acquiring knowledge. As they had to write their own reflections at the end of the course as well as analyse reflections from other students, they obtained a better understanding of what they had actually learned but also of why a Practice as Research approach is useful for students.

Being given the opportunity to co-author an article gave them an insight into the writing process for an academic journal. This also reflects a Practice as Research approach as they learn from doing the co-authoring. They learned, for instance, to consider carefully the reviewers’ feedback while making sure that any changes would not distract from the main points of the article. Thus, a valuable lesson was learned in how to maintain one’s own integrity as an academic and stay true to one’s ideas, while also being open to other people’s ideas. It was also valuable for the teacher to obtain this inside look from students. Discussing the data and results gave all of the authors a greater and more complete understanding.

Developing an interactive narrative to communicate this research proved a challenge and illustrates the difficulty of bridging the theory-practice gap. The authors struggled to design a narrative that would serve both the online and the offline reader. Facilitating interactive navigation also means that the different elements of the argument needed to be connected through links rather than text. This entailed a move from ‘telling’ to ‘showing’ connections. For this article, the authors explored the possibilities of the VIEW platform. They invite other researchers to continue this exploration.

More research into the added value of Practice as Research for BA students is needed, of course, but the results presented here suggest that Practice as Research can help overcome both the epistemic boundaries of theory and bridge the theory-practice gap for BA media students, in order to teach them new knowledge, forms of dissemination, and practices to prepare them for the job market.

108 Nelson, Practice as Research in the Arts, p. 8–9.
109 Hmelo and Guzdial, ‘Of Black and Glass Boxes: Scaffolding for Doing and Learning.’
110 Hmelo and Guzdial, ‘Of Black and Glass Boxes: Scaffolding for Doing and Learning.’
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Biographies

Willemien Sanders holds a PhD in Media Studies and is a lecturer in the Department of Media and Culture Studies, Utrecht University. Her research interests include, but are not limited to, documentary film and non-fiction film and television production. For EUscreenXL (2013-2016), she was involved in developing tools for contextualizing audio-visual content and publishing online with audio-visual material. She is currently investigating documentary impact production. She is a co-chair of the Media Production Analysis working group of IAMCR. In addition, she is a freelance critic for the Modern Times Review.

Daniel Everts is currently a third year Bachelor of Arts student in Communication and Information Studies at Utrecht University, where he is also enrolled in the Humanities Honours Programme. His main focus is on contemporary media developments in the fields of film and television. He is currently writing his BA thesis on environmental discourse in contemporary Dutch documentaries. His paper on localization practices in the contemporary television industry is due to be published in the student-run magazine for audio-visual culture, BLIK, come summer of 2018. Daniel has been involved in the creation of multiple documentaries (academic and otherwise) in the roles of director, D.O.P, editor, researcher, interviewer, and music composer.

Bonnie van Vugt is a third year Liberal Arts & Sciences student at Utrecht University. She focusses mainly on philosophy, film, media, and culture. She is currently writing her interdisciplinary thesis on how to criticize films as an art form, in collaboration with students from Film Studies and Artificial Intelligence. She is also enrolled in the Humanities Honours programme, in which she uses (documentary) film to present her philosophical / socially critical research. She recently started volunteering at the EYE study collection centre.
Appendix: Course assignments

The course included the following assignments.

Assignment 1: Lachman’s Five E’s

At the very beginning of the course, students reflected on existing interactive projects using Lachman’s discussion of the Five E’s model of experience design. According to Lachman, the model ‘has particular meaning for digital documentary creators’ (p. 7) because of the uniqueness of their work, their independence from established media practices, and the relationship with questions of outreach and success of a project. It seemed a good starting point to bridge reflections on existing projects with reflections on their own projects. Students analysed their own experiences with three interactive narratives, chosen from a range of projects available to the public. These included:

Are you happy?; Bear 71; The Big Issue: A Web Documentary on the Obesity Epidemic; Bistro in Vitro; Do Not Track; Filming Revolution; Fort McMoney; A Game of Shark and Minnow; Gaza/Sderot; Hidden Wounds; Highrise; Hollow; Immigrant Nation; Journey to the End of Coal; Pine Point; Prison Valley; Refugee Republic; Solar System; Universe Within; The Whale Hunt.

They answered questions such as: ‘How was I attracted to this narrative (or not)?’; ‘How was I brought inside of it?’; ‘How did I interact with it?’; ‘How did I terminate my engagement with it?’; and ‘How may I return and engage with it in the future?’

Assignment 2: Presentation

In the third week of the course, students presented their research interests/questions, their anticipated sources, and the basic arrangement of their narrative, including arguments for their choices. They received peer feedback on their ideas. In addition, a pitch before an industry professional was scheduled but, unfortunately, this had to be cancelled.

Assignment 3: Assessment criteria

In order to discuss and reflect on the question of how to assess the quality of the practical course results, students formulated five criteria for assessment, founded on arguments using two of the course readings and referring to two projects they had discussed in Assignment 1. This was meant to promote their reflections on their own work based on their earlier reflections and experiences.
**Assignment 4: Reflection report**

Part of students’ final assignment consisted of a report in which they reflect on what they have learned. More specifically, they were asked to discuss and account for the choices they have made with respect to their interactive narrative. They were also asked to reflect on their own functioning by addressing questions about what issues they encountered and how they dealt with them, what they learned about their studies in relation to practice, and themselves as practitioners.