

Xinxin Li

FILM EDUCATION AS TRANSFORMATIVE LEARNING

Faculty of Information and Communication Technology
Master Thesis
May 2021

ABSTRACT

Xinxin Li: Film education as transformative learning
Master Thesis
Tampere University
Digital Literacy Education
May 2021

To maximise the educational value of a film as educational material for facilitating transformative learning, it requires educators to evaluate the film in the first place. However, there is a lack of evaluation guideline or framework provided for educators. Thus, this study aims to link film education with transformative learning and develop a framework to evaluate a film as educational material for facilitating transformative learning. By studying a selected film as an example, this study also contributes to providing a research-based systematic analysis of the selected film to create its related learning material further.

This study employed the design inclusive user experience research method to develop an evaluation framework for film education as transformative learning by applying the topic-specific two-step approach for user experience research with student teachers on visual arts. This study is based on the collaboration of a film education institute, Koulukino. A selected film as public educational material provided by Koulukino was studied as an example to develop the evaluation framework. The data were collected from reflection notes of film appreciation, pedagogical idea-sharing documents, and semi-constructive interviews. The data were analysed with the thematical analysis method.

The findings revealed that film education and transformative learning could be integrated into a dual learning process with three main learning stages: facing problem stage, up-taking stage, and breaking out stage. The evaluation framework was formulated as five steps: first, film appreciation and writing reflection based on reflection note; second, mapping and matching useful elements to the integration model; third, creating or adapting the film's learning material; fourth, peer discussing meeting for revising the film's learning material; fifth, writing teaching reflection on the practice result of the film and its learning material.

This study only completed step one of the topic-specific two-step approach for user experience research to generate the evaluation framework due to time limitation. Further study is needed to test the efficacy of the evaluation framework. In the future study, it is suggested that putting the evaluation framework into practice among educators to test its feasibility and improve its flaws by continuing the step-two of the topic-specific two-step approach for user experience research method to develop the positive user experience.

Keywords: film education, film literacy, transformative learning, double stimuli, evaluation framework

The originality of this thesis has been checked using the Turnitin Originality Check service.

CONTENTS

1	INTRODUCTION	5
2	OVERVIEW OF THE FIELD.....	10
2.1	Film education.....	10
2.2	Transformative learning	12
2.3	Transformative learning by double stimuli	13
2.4	Film education and transformative learning	15
2.5	Summing up and Research Questions	18
3	DESIGN-INCLUSIVE USER EXPERIENCE RESEARCH	20
3.1	The selected film.....	23
3.2	Online session and semi-constructive interview	24
3.3	Data collection	26
3.4	Data analysis	26
4	FINDINGS.....	29
4.1	Analyzation of the selected film	29
4.1.1	<i>Effect of the film.....</i>	<i>29</i>
4.1.2	<i>Message of the film</i>	<i>30</i>
4.1.3	<i>Emotion of the film.....</i>	<i>31</i>
4.1.4	<i>Execution of the film</i>	<i>32</i>
4.2	Pedagogy study of film education	33
4.2.1	<i>Educational value of film.....</i>	<i>33</i>
4.2.2	<i>Pedagogy of applying films in class.....</i>	<i>34</i>
4.3	The selected film and transformative learning	35
4.3.1	<i>Understading of transformative learning.....</i>	<i>36</i>
4.3.2	<i>Film and transformative learning</i>	<i>36</i>
4.3.3	<i>Pedagogy of transformative learning with the selected film</i>	<i>37</i>
5	DISCUSSION	40
5.1	Evaluating the selected film	40
5.1	Linking film education with transformative learning	42
5.2	Evaluating a film as educational material to facilitate transformative learning with design-inclusive user experience resaerch method.....	43
6	CONCLUSION	46
7	EVALUATION	49
	REFERENCES.....	51
	APPENDICES	55
	Appendix 1: Koulukino's leaflet of film appreciation guide.....	55

TABLES

TABLE 1. GENERAL INFORMATION OF THE SELECTED FILM23

TABLE 2. REFLECTION NOTE OF FILM APPRECIATION25

TABLE 3. DATA COLLECTION METHOD AND AIMS.....26

TABLE 4. EXAMPLE OF RAW DATA REGARDING THEMES AND COEDS28

FIGURES

FIGURE 1. TRANSFORMATIVE LEARNING BY DOUBLE STIMULI (TADS) MODEL 14

**FIGURE 2. INTEGRATION MODEL OF TRANSFORMATIVE LEARNING AND FILM
EDUCATION REGARDING THE TADS MODEL 16**

**FIGURE 3. TOPIC SPECIFIC TWO-STEP APPROACH FOR USER EXPERIENCE
RESEARCH21**

**FIGURE 4. DESIGN-INCLUSIVE USER EXPERIENCE RESEARCH METHOD APPLIED IN
THIS STUDY WITH STEP ONE OF THE "TWO-STEP APPROACH"22**

**FIGURE 5. EXAMPLE OF MATCHING THE SELECTED FILM'S ELEMENTS AND RELATED
PEDAGOGIES FOR ECAH STAGE OF THE INTEGRATION MODEL40**

**FIGURE 6. FIVE-STEPS EVALUATION FRAMEWORK FOR FILM EDUCATION AS
TRANSFORMATIVE LEARNING43**

1 INTRODUCTION

Audio-visual material has been widely used in the education field in recent years. Dike (1993) defines audio-visual material as material that does not merely count on reading. Information is conveyed through hearing, vision, or both (Ashaver and Igyuve, 2013). According to the sense used in the investigation process, audio-visual material can be divided into three groups. The first group is auditory material, such as recording soundtrack, podcast, and music. The second group is visual material, for example, photographs, slides, and posters. The third group combines auditory and visual material, for instance, videos, motion pictures, and films. (Tepla, Demnerova, Stiborova, 2019) Because audio-visual material has multiple advantages, more and more favourable teachers respond to the effective influence of audio-visual material on the teaching process and teaching results. The advantages of audio-visual material are it attracts the audiences' attention; second, it visualises the abstract topics so that the conceptual issues can be more understandable; third, it removes the language barrier by delivering the information in an audio-visual way. As one kind of audio-visual material, films have increasing influences in the education field. A film has the power to affect one's vision and one's comprehension of the world. It can make one forget the external world, drive one to new worlds, and challenge one to reflect on the world in which one lives. (British Film Institute, 2015) Even though films as educational material have been widely used for different teaching purposes, little attention is paid to the teaching purpose of facilitating transformative learning.

Transformative learning plays a crucial role in the learning process nowadays. Jack Mezirow (2018), who first proposed the concept of transformative learning, describes transformative learning as a process by which we transform problematic frames of reference to make them more inclusive, discriminating, open, reflective, and emotionally able to change. The problematic frames of reference can be a mindset, habits of mind, or meaning perspectives;

in other words, it is sets of assumption and expectation. (Mezirow, 2018) The transforming process orientates how learners interpret and reinterpret their sense experience, make meaning, and hence learn. (Mezirow, 1991) Due to technological innovations in the post-industrial information society, the nature of education and learning is no longer limited to fixed-body knowledge communication (Alheit, 2018). Instead, learners must continuously produce new knowledge, values, and skills to face the challenges brought by the fast-changing society. The process of continuously producing knowledge, value, and skills innovatively is considered the transformation process. In order to manage transformation, learners are required to be aware of the process of transformative learning and put it into practice. Therefore, to help learners achieve transformation, it is necessary to set facilitating transformative learning as one of the teaching goals in the education process.

Connections between film education and transformative learning can be found in the literature. Films are ideal educational material to facilitate transformative learning. As one of the well-known organisations in the film education industry, British Film Institute reveals three key dimensions in film education. The three key dimensions of film education are critical thinking, creativity, and culture. Film education is about developing a culture of informed and critical film viewing and fostering a culture of filmmaking based on the interrelation between criticality and creativity. (British Film Institute, 2015) In film education, a film is usually considered as a bridge that creates a 'common' or 'third space' for learners to open up more effortless conversations of complex topics (Anders, Canon, Clemmensen, Freitag-Amtmann, Rehak and Tiedeke. 2019). A film as a mirror can reflect a problematic situation, also known as a conflict of motive in transformative learning, that viewers may not have experienced in real life. With the facilitation of educators, learners acquire film literacy, which can read and write the audio-visual language, to understand the problematic situation further. Afterwards, learners develop possible solutions for overcoming the problematic situation by using viewing to make and then evaluate the viewing of the creation need to be explored (British Film Institute, 2015). Thus, the value of film education is not only on cultivating film literacy but also on fostering learners to generate wisdom and skills to conquer real-life challenges.

In light of this, film education and transformative learning share the same educational purpose -- to inspire learners to explore and generate new insights which can enlighten them to develop a better self in the learning process. Learners can achieve transformation with cyclical practices of the film education learning process. Hence, the first objective of this study is understanding how film education can be integrated with transformative learning in the context of teacher education.

The film and the way educators apply to facilitate transformative learning impact the achievable outcome of learners. Although previous research indicated that film appreciation could ignite a transformative learning process by offering different visions (Roy, 2016), transformative learning usually happens apart from awareness (Mezirow, 2018). Learners' intuitions take the place of critical reflection of hypotheses. Learners need the assistance of educators in making themselves aware of this process while developing their capacity and propensity to engage in transformative learning. (Mezirow, 2018) Thus, educators are required to choose and evaluate an appropriate film to facilitate transformative learning and develop the related learning material of the film accordingly.

In order to help educators to evaluate a film for the teaching purpose of facilitating transformative learning, it is beneficial to provide an evaluation framework. With such an evaluation framework, educators can clearly and easily map out the valuable and helpful elements of a film for their teaching purposes to improve teaching efficacy and efficiency. Simultaneously, it promotes pedagogy autonomy because educators can design the film's learning material or revise the pre-existing learning material according to the evaluation result based on the evaluation framework. Thanks to technology development, mass sources of films and film education guidelines are provided online and offline. However, most of these reference sources of film education, for example, teachers' guidelines and film education framework, are produced and provided by film education institutes, such as British Film Institute. There is a lack of academic sources for film evaluation, especially for evaluating a film for facilitating transformative learning. Therefore, based on the integration of film education and transformative learning, the second objective of this study is developing a framework for evaluating a film

as educational material for facilitating transformative learning from educators' perspectives.

This study is based on the collaboration with Koulukino 2020 for developing online learning material with film education. As a student of digital literacy education, I participated in the course "film education" with the interest of studying further about how learning material can be designed. The Koulukino association is supported by the Finnish Ministry of Education and Culture. All Finnish cinemas have committed themselves to the organisation of Koulukino screenings. It produces learning material related to big-screen films and provides the material on its website for all educational levels free of charge. A documentary-fiction film named "to teach a bird to fly" was selected from the sources of public educational material provided by Koulukino. The film explores bird extinction and climate change through a fictionalised story told from a forward-looking perspective (Rainio and Roberts, 2020). Because the selected film is newly released, there is no existing related learning material. Thus, one of the contributions in this study is providing a research-based systematic analysis of this new film to create the related learning material.

The selected film was studied in an educational session with visual art student teachers at Tampere University. The evaluation framework aims to provide a template to help teachers evaluate films. It is necessary to study with the actual users of this framework to understand their insights to deliver positive user experiences and maximise its effectiveness. On the other hand, it may generate more critical and valuable ideas for the selected film by studying it with Finnish student teachers as Finland is considered one of the top countries with good literacy and digital literacy rate. Besides, it can be beneficial to student teachers to develop their professional skills by participating in this study because teachers need a deep understanding and high awareness of transformative learning. Therefore, Finnish student teachers in the teacher education program were invited to participate in this research.

The following chapter 2 overviews the theoretical aspects of film education and transformative learning and describes the integration of these two terms.

Chapter 3 presents the methodology of this study and the outlines of data analysis. Chapter 4 shows the findings of this study. The limitations of this study are discussed in chapter 5, and the conclusion is made in chapter 6. Chapter 7 shows the evaluation of this study.

2 OVERVIEW OF THE FIELD

2.1 Film education

According to the framework for film education produced by the British Film Institute (2015), film education is defined as developing a culture of informed and critical film viewing and fostering a culture of filmmaking based on the interrelation between criticality and creativity. Critical thinking, creativity and culture are three key dimensions in film education. Critical thinking is the capacity to comprehend and explore films in all their forms while developing a disposition whereby one can continually question how the film can affect one, move one, challenge one, and confront one. Critical thinking is developed over time by testing, questioning, and refining judgments. It implies a consciousness of other art forms that affect, influence, and improve the pleasure we experience in viewing a film. The creative process, also known as filmmaking, is linked to critical thinking by using viewing to make and then evaluate the viewing of the creation need to be explored. The creative process entails investigative, analytical, experimental, practical, and expressive skills as well as critical judgment. Filmmaking should be a cyclical practice process. It demands learners to review ideas and techniques and repeatedly test and experiment with ideas and methods. Film culture implies that films not only help one understand oneself, one's culture, and identity but also help one understand others' culture and values. People usually participate in film culture by listing, canon-making, curating, programming, and then debating and discussing. One can engage with the world deeper and broader with wider access to films. (British Film Institute, 2015)

With the background of film culture, critical thinking and creativity are cultivated by managing film literacy. Film literacy is the ability to read and write audio-visual language. In film education, audiences are encouraged to explore the meaning of films, share emotional, cognitive, and aesthetic responses (Parry

& Bulman, 2017). Audiences are empowered through the process of making meaning from films, making films, and sharing and discussing films (Parry & Bulman, 2017). The meaning-making process consists of six elements: 1. Linguistic meaning, 2. Visual meaning, 3. Audio meaning, 4. Gestural meaning, 5. Spatial meaning and 6. Multimodal patterns of meaning relate the first five modes of meaning to each other. (Cope and Kalantzis, 2000; Kovanen, K., 2018) The process of making meaning from films usually happens during film appreciation.

In the contemporary digital culture, films are ideal educational material. On the one hand, films create a 'common' or 'third space' for learners to open up more effortless conversations of complex topics (Anders, Canon, Clemmensen, Freitag-Amtmann, Rehak and Tiedeke. 2019). At the same time, learners can discuss and interact with real-life scenarios built up in the third space, even though they have not experienced in their life. Bahabha (1994) indicates that the third space is developed and enlisted to define communication both as the production of meaning and a complex act of cultural performance. The production of meaning requires that these two places be mobilized in the passage through a third space, representing both the general conditions of language and the specific implication of the utterance in a performative and institutional strategy of which it cannot 'in itself' be conscious. This unconscious relation introduces an ambivalence in the act of interpretation (Bahabha 1994). (Potter & McDougall, 2017) Gutierrez (2008) points out the third space as a way to think about the social actors in a given setting, their autobiographical and temporal specificities, and how these could be accounted for in designing an emancipatory form of educational experience (Potter & McDougall, 2017). On the other hand, thanks to technology development, films are easily accessed and manipulated by general learners to narrate their own stories based on their backgrounds and experiences. Cinematography can be an identity engine and a way to understand and explore different emotions. Storytelling has been long used as an educational tool. It enables diverse learners to discover live experiences and gain a more nuanced understanding of difference. (Aveling, 2001) Digital storytelling is described as a personal narrative developed by general people with non-professional tools. It documents a wide range of life experiences embedded with

cultural and historical background with the combination of voice, sound and images into a short video. (Lambert, 2010, 2013; Reed & Hill, 2012). Digital storytelling can impact how people engage with each other across difference to lead to wisdom, compassion, and awareness. (Reed & Hill, 2012). The digital storytelling process is emphasized as social pedagogy. This approach strongly relies on student collaboration through the disclosure of memories. (Benmayor, 2008; Stewart & Gachago, 2016) Moreover, films can be a language without borders since it travels easily and attracts audiences. At the same time, it tells stories and stimulates co-creation and dialogue. (Anders, Canon, Clemmensen, Freitag-Amtmann, Rehak and Tiedeke, 2019) It powerfully engages learners by watching films thanks to the removed language barrier so that learners' understanding, imagination, and appreciation take centre stage (British Film Institute, 2003).

2.2 Transformative learning

Jack Mezirow (2018), who first proposed the concept of transformative learning, describes transformative learning as a process by which we transform problematic frames of reference to make them more inclusive, discriminating, open, reflective, and emotionally able to change. The problematic frames of reference can be a mindset, habits of mind, or meaning perspectives; in other words, it is sets of assumption and expectation. (Mezirow, 2018) The transforming process orientates how learners interpret and reinterpret their sense experience, make meaning, and hence learn. (Mezirow, 1991) People usually confuses the meaning of transformative learning and informative learning. The process of informative learning seeks to add valuable new contents to the existing form of one's way of knowing. Informative learning leads to the results of increasing knowledge, expanding skills and broadening the already established cognitive structures. All of these results are served for deepening the resources to the existing frame of reference. Therefore, informative learning is a leading-in process, while transformative learning is a leading-out process. The process of transformative learning aims to change not only what we know but also how we know; it puts the form of one's way of knowing at the risk of change and increases one's capacity. (Kegan, 2018)

Mezirow (2018) explains that the process of transformative learning involves: first, reflecting critically on the source, nature and consequence of relevant assumptions; second, determining that something is true by using empirical research methods in instrumental learning; third, arriving at more justified belief by participating freely and fully in an informed contenting discourse in communicative learning; fourth, taking action on our transformed perspective; and fifth, acquiring a disposition. There are two significant elements of transformative learning. One is the critical reflection or critical self-reflection on assumptions; the other is participating fully and freely in dialectal discourse to validate a best reflective judgment. (Mezirow, 2018)

Transformative learning usually happens apart from awareness (Mezirow, 2018). Learners' intuitions take the place of critical reflection of hypotheses. Learners need the assistance of educators in making themselves aware of this process while developing their capacity and propensity to engage in transformative learning. Transformation associates participating in dialogue with the unconscious aspects of the psyche. It frees one from obsessions, compulsion and complexes that can shape and distort our frame of reference. Learners attain insight into aspects of themselves that are outside conscious awareness but influence their sense of self and their interpretations and actions by having a dialogue between the conscious and unconscious and being mediated through symbols and images. In the progression of this interaction, both content and the self are potentially transformed. Dean Elias (1997) argues that transformative learning is fostered by consciously guided processes such as appreciable access and reception of the symbolic content of the unconscious and critical analysis of the underlying premises. (Mezirow, 2018)

2.3 Transformative agency by double stimuli

The model of transformative agency by double stimuli (TADS) developed by Sannino (2020) is a valuable model of reference to show how to facilitate transformative learning. Initially described by Vygotsky (1997/1931; Sannino, 2015b), transformative agency by double stimulation is a process by which learners can intentionally break out of conflicts of motives, which is also called

the first stimulus, and change their circumstances by forming auxiliary motives, which is also called the second stimulus and implement them systematically. In the model of TADS (Figure 1), a problematic situation triggers a paralysing conflict of motives. Then learners try to manage the problem by turning to artefacts (or second stimulus) and decide to rely on them when the problematic situation occurs again. Each new problematic situation is cognitively and emotionally critical in that it reactivates the conflicting motives. When learners use the second stimulus, this implementation helps the learner gain control of and transform the problematic situation into a more understandable and manageable one. The repeated implementation of the second stimulus to deal with the problem strengthens the learner’s understanding of the problem and capacity to take further actions. It leads to the result that both the problematic situation and the learner are transformed. (Sannino,2020)

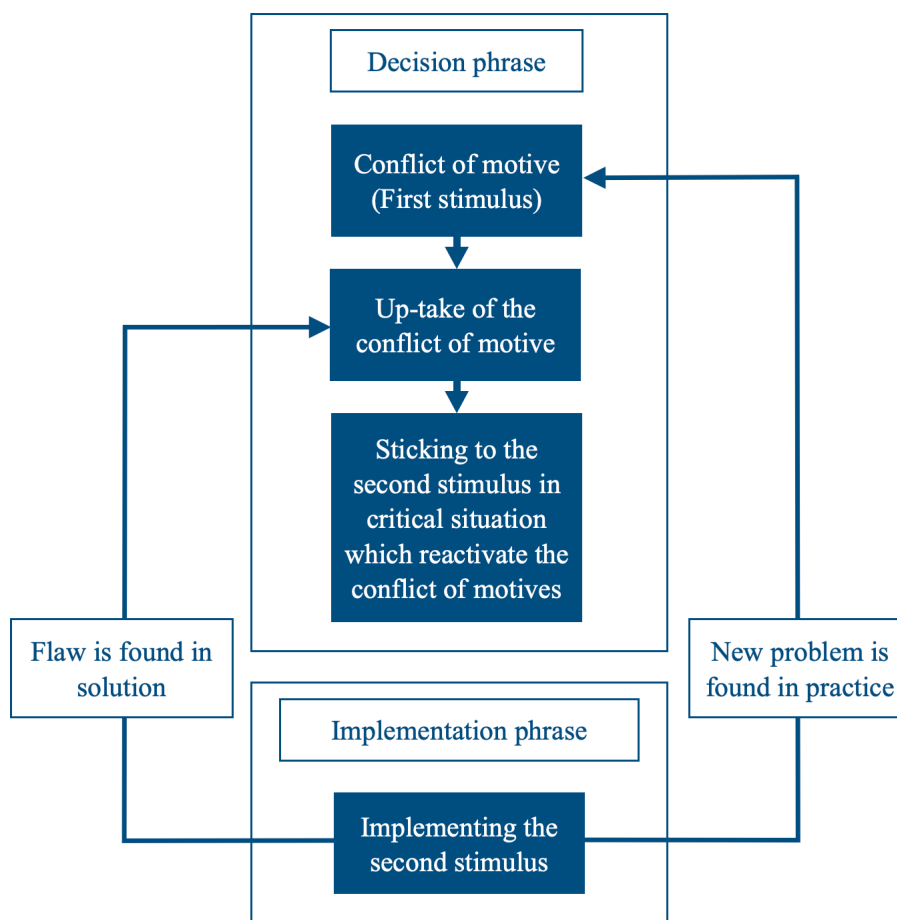


FIGURE 1. Transformative learning by double stimuli (TADS) model (Sannino, 2020)

In the double stimulation process, the second stimulus is an artefact that acts as a fixed point or stable platform for transformative action. Based on the problematic situation and available sources, a wide range of artefacts may be used as second stimuli. Literature on the transformative agency by double stimulation lists many of them (e.g., Sannino & Laitinen, 2015; Sannino, 2016; Hopwood & Gottschalk, 2017). They can be, for example, material things (a clock, a calendar, or a cup of coffee) or non-material things (a discussion on a topic, a set of questions, a song, or an idea). When learners deliberately take these artefacts as auxiliary motives to conquer the conflict of motives triggered by the problematic situation, these artefacts become second stimuli. According to Sannino's "warping metaphor", compared with traditional anchoring by stabilising devices characterised as 'anchoring backwards', she suggests that the second stimulus is understood as a forward-oriented keedge anchor, which is instrumental in the elaboration of new meaning. This instrumental second stimulus may be stabilised to the point of supporting transformative actions in problem situations. It can be explained as three actions of implementing the second stimulus with the "warping metaphor". The first action is searching. In the searching action, the crew throws the keedge anchor to find the suitable ground. The second action is taking over. In the taking-over action, the crew regains control of the situation, allowing them to pull the vessel out of harm's way when the keedge is hooked to the ground; meanwhile, the crew can manoeuvre the vessel, but it is still in the troubled area. The third action is breaking out. In the breaking-out action, the vessel is moved away from the problem area. (Sannino, 2020)

2.4 Film education and transformative learning

In literature, film education and transformative learning share a similar process and the same educational purpose -- to inspire and encourage learners to explore and generate new insights that can enlighten them to develop a better self in the learning process. It can maximise the learning efficacy and enhance learning achievement by integrating film education and transformative learning. The integration of these two terms can occur by using films as educational material to facilitate transformative learning in the film education class. In other words, film education and transformative learning are facilitated simultaneously in the same

learning process. Due to the fact that films are engaging, immediate, and multi-dimensional, it not only carries audio-visual impacts but also brings the emotional impacts to double the intellectual influences. (Roy, 2016) Through critically viewing films and the practice of storytelling, it can lead a result in gaining new insights and perspectives, and many identified specific learning, changes in beliefs and attitudes, and even changes in behaviour or actions (Roy, C. 2016). During this dual learning process, learners acquire film literacy as well as enhance the awareness of transformative learning.

The integration model of film education and transformative learning can be explained as three main stages regarding the TADS model (hereafter referred to as “integration model”). (Figure 2)

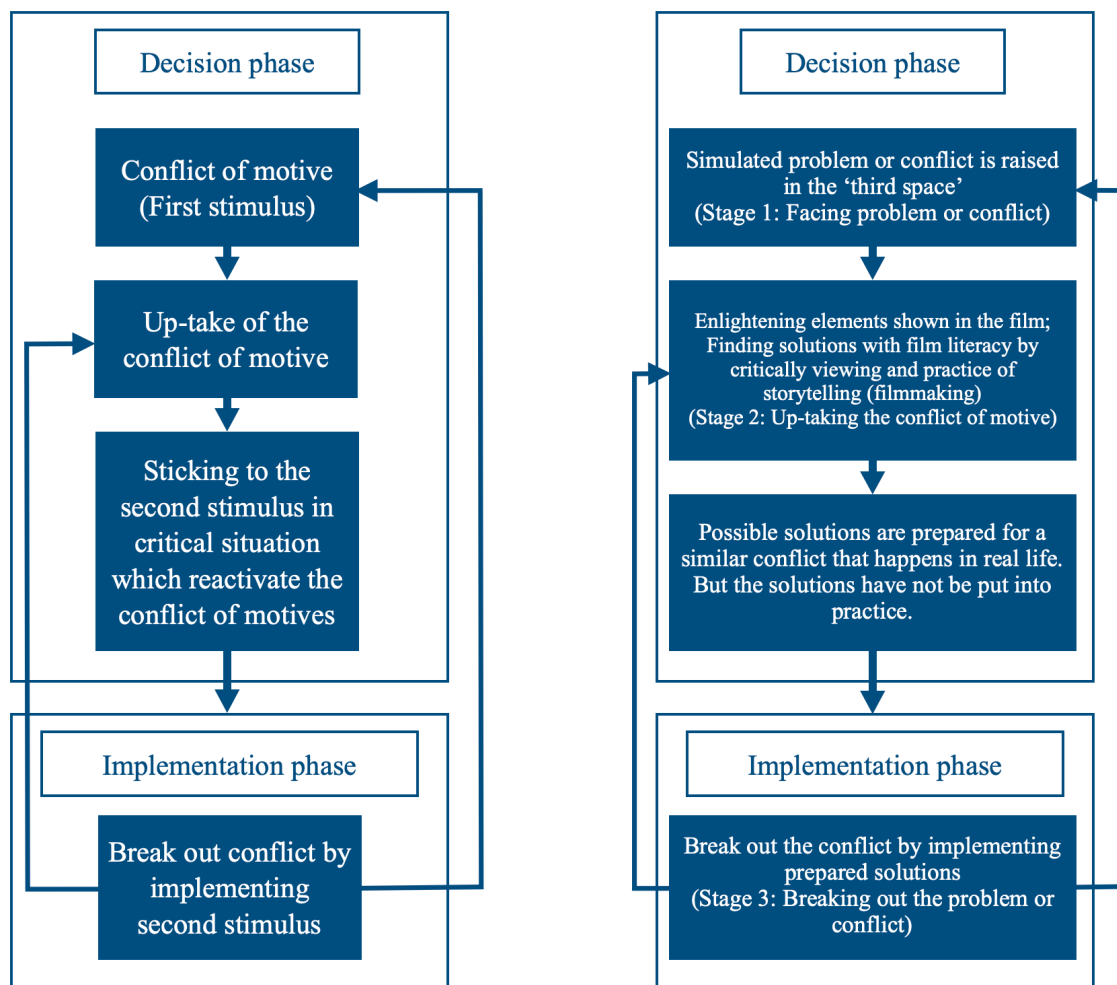


FIGURE 2. Integration model of transformative learning (Mezirow, 2018; Elias, 1997) and film education (British Film Institute, 2019; Bhabha, 1994; Gutierrez, 2008; Aveling, 2001; Lambert,

2010, 2013; Reed & Hill, 2012) regarding the TADS model (Sannino, 2020)

The first stage is facing a problem. Films bring the conflict of motive in front of learners by reflecting the real-life problematic situation, so learners are set in the stage of facing conflict. The second stage is up-taking the conflict of motive. With film literacy, learners understand the conflict situation deeper through film appreciation by understanding the six elements of the meaning-making process. The six elements of meaning-making refer to linguistic meaning, visual meaning, audio meaning, gestural meaning, spatial meaning and multimodal patterns of meaning that relate the first five modes of meaning to each other (Cope and Kalantzis, 2000; Kovanen, K., 2018). Afterwards, learners develop possible solutions by the practice of storytelling or filmmaking to uptake control of the conflict. In this up-taking stage, learners proceed with the transformative learning process and improve their film literacy by using it to explore possible solutions. The third stage is breaking out the conflict. It occurs in real life when the learners implement the prepared solutions in a specific problematic situation. Through the first circle of practice, learners discover the flaw of the solutions and may face a new problem; then, they go through the process of transformative learning by double stimuli again. Learners go through the process again from the stage of up-taking conflict of motive if they found flaws in the implemented solution. Learners go through the process again from the beginning stage if they found a new problem during the implementation phase, namely, the stage facing conflict. In the second cycle of the process, learners are able to deal with every step independently because learners had acquired film literacy and skills from the facilitation of the first cycle. With cyclical practices, it strengthens learners' understanding of the problem and capacity to take further action. It leads to the result that both the learners and the conflict situation are transformed.

Film education is in line with transformative learning. This dual learning process needs the support of educators and related learning material of films to make this happen. The role of educators in the learning process is to guide learners to acquire film literacy and assist learners in making themselves aware of this process while developing their capacity and propensity to engage in

transformative learning (Mezirow, 2018). Although it seems this dual learning process can be taken place easily, not every film is suitable for facilitating transformative learning. The film should match specific requirements; for example, it raises the problematic situation and has elements that enlighten learners to come up with new insights. Therefore, to efficiently facilitate transformative learning in a film education class, the crucial step is to choose and evaluate an appropriate film and develop the related learning material of the film accordingly.

Thanks to technology development, mass sources of films and film education guidelines are provided online and offline. However, most of these reference sources of film education, for example, teachers' guidelines and film education framework, are produced and provided by film education institutes, such as British Film Institute. There is a lack of academic sources for film evaluation, especially for evaluating a film for facilitating transformative learning. In order to help educators to evaluate a film for the teaching purpose of facilitating transformative learning, it is beneficial to provide an evaluation framework. With such an evaluation framework, educators can clearly and easily map out the valuable and helpful elements of a film for their teaching purposes to improve teaching efficacy and efficiency. Simultaneously, it promotes pedagogy autonomy because educators can design their learning material or revise the pre-existing learning material according to the evaluation result based on the framework.

2.5 Summing up and Research Questions

By overviewing film education and transformative learning, it shows that film education is in line with transformative learning. These two terms share the same educational purpose -- to inspire learners to explore and generate new insights which can enlighten them to develop a better self in the learning process. A film as a mirror can reflect a problematic situation that viewers may not have experienced in real life. With the facilitation of educators, learners acquire film literacy to understand the problematic situation further. Afterwards, learners develop possible solutions for overcoming the problematic situation by using

viewing to make and then evaluate the viewing of the creation need to be explored (BFI, 2015). Consequently, learners can achieve transformation with cyclical practices of the film education learning process.

To ensure the efficacy and efficiency of facilitating transformative learning in a film education class, it requires educators to choose and evaluate an appropriate film and develop the related learning material of the film accordingly. Even though there are mass sources of films and film education guidelines online and offline, most of these reference sources of film education are produced and provided by film education institutes. There is a lack of academic sources for film evaluation, especially for evaluating a film for facilitating transformative learning. In order to help educators to choose an appropriate film, it is necessary to develop a framework for evaluating films for facilitating transformative learning (hereafter referred to as “evaluation framework”) from teachers’ perspective.

Therefore, the main research question of this study is “how is the user experience method working in the analyses of film education as transformative learning?” and the sub-question is “how is film education is linked with transformative learning?” This study is based on a collaboration with a film education institute -- Koulukino. A film was selected from the sources of public educational material provided by Koulukino and studied as an example to develop the evaluation framework. Because the selected film is newly released, there is no existing related learning material. Thus, this study also contributes to providing a research-based systematic analysis of this new film to create the related learning material.

3 DESIGN-INCLUSIVE USER EXPERIENCE RESEARCH

Based on the aims of this study, the design-inclusive user experience (UX) research method was employed in this study. Roto (2011,6) reveals that user experience explicitly refers to the experience derived from encountering systems. 'Encountering' can be explained as using, interacting with, or being confronted passively. Vermeeren (2015) defines UX research as research in which there is a focus on advancing the field of UX design, finding the means that enable particular user experiences, or studies investigating and developing UX design and assessment methods (cf. Roto et al. 2011,5). The most crucial feature of design-inclusive research is that it embeds "design" as a research means. "Design" as a research means may be artefact, process, entity, phenomenon and knowledge. The goal of design is to create new opportunities for generating new knowledge, which cannot be derived otherwise. (Horvath, 2008). In addition, Stappers (2007,87) states that 'the designing act of creating prototypes is in itself a generator of knowledge. (Vermeeren, 2015) Hence, in this study, the term "design-inclusive" UX research can be seen as a synonym for "design through research" (RtD), which refers to the process of iterative and creative design where the created artefacts themselves are the outcome of the research (Vermeeren, 2015). In this study, the outcome was expected to be the evaluation framework. Zimmerman, Forlizzi, and Evenson (2007) point out that in RtD, 'design researchers focus on making the right thing; on artefacts intended to transform the world from the current state to a preferred state' (497). In doing so, design researchers engage with what they call 'wicked problems' (Rittel and Webber 1973). The 'wicked problems' refers to problems that cannot be accurately modelled and cannot be addressed by 'using the reductionist approaches of science and engineering' (Zimmerman, Forlizzi, and Evenson 2007, 495) and that there is no "solutions" in the sense of definitive and objective answers' (Rittel and

Webber 1973, 155). In this study, the "wicked problem" was addressed as "a framework of evaluating films for facilitating transformative learning".

In the research process, the “topic-specific two-step approach for users experience design” (Krueger, 2020) (hereafter referred to as “two-step approach”) was applied (Figure 3).

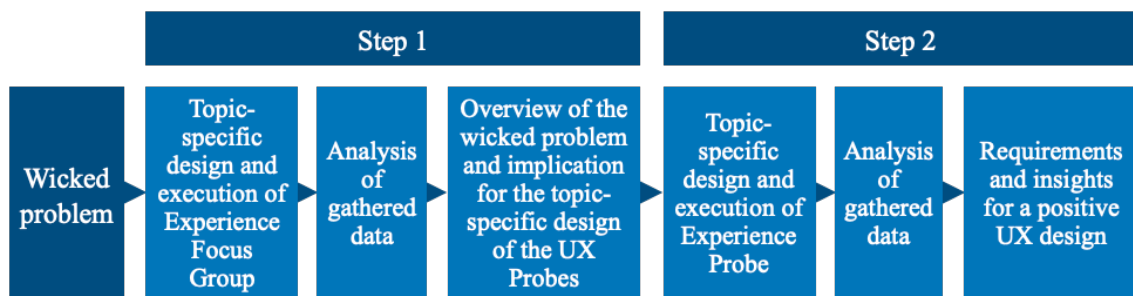


FIGURE 3. Topic-specific two-step approach for user experience research (Krueger, 2020)

The two-step approach includes experience focus group and experience probe. The first step is to establish a deep and rich understanding of the user group and the context. It aims to gather controversial insights about the “wicked problem” from multiple users’ experiences. The first step results are used as a base for redefining, specifying, and narrowing down the user research questions and the definition of relevant user groups for the second step. The second step is to develop a deep and rich understanding of specific user groups and their requirements regarding positive experiences. It aims to gain insights into possible interdependencies, which are relevant factors when designing for a positive user experience (Kujala, Minge, Pohlmeier, Vogel, 2012). (Krueger, 2020) Because it requires a long period for testing the results generated in the first step so that the second step can be continued, in this study, only the first step was completed.

Figure 4 presents the process of implementing step one of the two-step approach in this study. First, the data were collected utilising analysis of qualitative documents and semi-constructive interviews. The qualitative documents refer to reflection notes of film appreciation and pedagogical idea-sharing documents in this study. Second, the gathered data were analysed with

the thematical analysis method. Third, an evaluation framework was formulated with the designed reflection note (Table 2) and integration model (Figure 2).

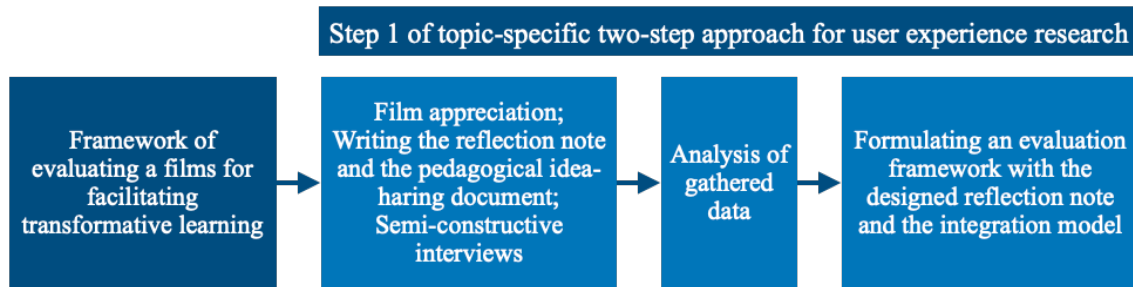


FIGURE 4. Design-inclusive user experience research method applied in this study with step one of the “two-step approach” (Krueger, 2020)

Finnish student teachers in the teacher education program were invited to participate in this research. Because the evaluation framework aims to provide a template to help teachers evaluate films, it is necessary to study with the actual users of this framework to understand their insights to deliver positive user experiences and maximize its effectiveness. In addition, it may generate more critical and valuable ideas for the selected film by studying it with Finnish student teachers as Finland is considered one of the top countries with good literacy and digital literacy rate. Besides, it can be beneficial to student teachers to develop their professional skills by participating in this study because teachers need a deep understanding and high awareness of transformative learning.

This study is qualitative research to gain a deep understanding of the researched objectives among a particular group of people. There were 6 participants; all of them were visual art student teachers at Tampere University. Two of the participants had some teaching experience, while others had none. The range of their age was from 22 to 38. The study was taken place via Microsoft Team online platform because of the Covid-19 situation. The film was selected from the sources of educational material provided by a film education institute, “Koulukino”, with the help of Ms Marjo Kovanen, an expert in film education. The research included two parts. Part one was an online session. With the help of Professor Sirkku Kotilainen and Professor Reijo Kupiainen, the online session was conducted with visual art student teachers to study the selected film and

explore the possible pedagogy for using it on transformative learning. The online session included two units: the first unit was film appreciation; the second unit was pedagogical idea-sharing. Part two was semi-constructed interviews. Four interviewees were from the participants of the online session.

3.1 The selected film

The selected film named “to teach a bird to fly” is a documentary-fiction film that explores bird extinction and climate change through a fictionalised story told from the future perspective. “A woman relates events from the past – today’s world – when her grandmother worked as a foster parent to a critically endangered bird, the Northern Bald Ibis. The film highlights this process as a locus of hope. It emphasises the future of the Ibis and the future of the environment and the planet. The scripted narration is based on interviews with the foster parent and other staff at the Waldrapp project but projected some 80 years into the future as stories passed down from one generation to another. The narrator recalls stories her grandmother told about the surprising bond she experienced with the birds. By “looking back at present”, the story connects the endangered bird species to the broader context of climate change, species extinction, and the future of our planet. (Rainio and Roberts, 2020)

The general information of the selected film is displayed in Table 1.

TABLE 1. General information of the selected film (Rainio and Roberts, 2020)

Name of the film:	To teach a bird to fly	Duration:	24 minutes
Written and produced by:	Minna Rainio and Mark Roberts	Director of photography:	Ilmari Mannermaa
Producer:	Maria Gullsten	Editor:	Jani Johansén
Original soundtrack:	Petri kuljuntausta	Produced by:	Flatlight Creative House, flatlight.fi
Founded by:	Finnish Film Foundation / SES/YLE/ AVEK	Additional funding:	KONE Foundation Taike / Finnish Arts Promotion Board Gold & Green

There were several reasons why this film was selected as an example for facilitating transformative learning. First, the story evoked awareness about the relationship between human and nature and led out question, such as “are people existing on the earth as consumers or as human in true sense?”. Second, it generated new insights about co-habitants and collocations between human and non-human. Such insights could be about the responsibility to non-human from a human perspective and understanding the relationship with a non-human. Moreover, it sparked a fresh understanding of the interaction between human actions in the present and world change in the future. Generally, the film projected problematic situations, such as climate change, species extinction, and co-habitant between human and non-human. These problematic situations could be the first stimuli to trigger the transformative learning process.

3.2 *Online session and semi-constructed interview*

Film appreciation and pedagogical idea-sharing were included in the online session. Film appreciation included film streaming and filling reflection note. Due to the lack of academic sources for evaluating films as educational material, the design of the reflection note in this study was based on the source from Koulukino’s leaflet of film appreciation guide named “film keys” (Koulukino, 2020) (appendix 1). There are six aspects of film appreciation presented on the leaflet, including effect, message, plot, emotion, character, and execution. There are several questions of each aspect to guide audiences to appreciate films. By evaluating the aspects and the related questions presented on the leaflet based

on the six elements in the theory of meaning-making process (Cope and Kalantzis, 2000; Kovanen, K., 2018) and modifying according to the educational purpose of facilitating transformative learning, the reflection note of film appreciation (Table 2) in this study was designed with five aspects — effect, message, emotion, execution, and transformative learning.

The reflection note (Table 2) was designed as a part of the evaluation framework. In order to get the most authentic feelings and views from the participants, the film was only briefly introduced its background instead of explicit contents. In order to make sure the film appreciation was not interrupted due to some possible internet issues, participants were asked to watch the film on their computers because interruption of the film appreciation might influence the experience of viewing it. The link to the film and the password were provided in the chat box of the online classroom. After the film streaming, the reflection note document was sent to participants via the chat box. They were asked to fill the reflection note and then send it back to the researcher by email. The reflection note was mainly for participants to express their views based on their understanding of the film.

TABLE 2. Reflection note of film appreciation

Number	Aspect	Reflective Questions
1	Effect	1. What kind of impact of the film had on you? 2. What were the most memorable aspect of the film?
2	Message	3. What message does this film have?
3	Emotion	4. What kind of emotion is this film giving in visual form for you? 5. How has the film delivered this emotion?
4	Execution	6. How the film was constructed in order to affect the viewer? (Please focus on audiovisual means and storytelling methods.)
5	Transformative learning	7. How would you use this film to mediate transformative learning? Please give one example.

The unit of pedagogical idea-sharing came after completing the reflection note. Participants were asked to write one pedagogical idea of facilitating transformative learning with the selected film in the document and send it back to the researcher's email.

Semi-constructed interviews occurred within one week after the online session while participants still had a deep impression of the film. It helped the researcher explore deeper participants' thoughts about the pedagogy of facilitating transformative learning by leading the conversation in a standardised way and allowing sufficient opportunity for relevant issues to emerge. The four interviewees were from the participants of the online session. Interviews were also taken place via Microsoft Team online platform. A set of slides with the prepared questions were used as guidance for the online interviews. All of the interviews were recorded in video form and transcript into written form afterwards.

3.3 Data collection

The data were generated from the reflection notes, pedagogical idea-sharing documents, and semi-constructed interviews. There was the different aim for different data collection method (see Table 3). The reflection note aimed to study the selected film comprehensively and deeply to discover the possible elements of the film that are suitable for facilitating transformative learning. The pedagogical idea-sharing document and the semi-constructed interview aimed to understand the link between transformative learning and film education to develop the evaluation framework by using the selected film as an example.

TABLE 3. Data collection methods and aims

Method	Session	Aim	Example of raw data
Reflection note	Online session	To study the selected film comprehensively and deeply; To discover the possible elements of the film which are suitable for facilitating transformative learning.	"... the situation the film portrayed of our time as being this great crossroads where we have to decide how we are going to act on these effects...are going to affect the future"
Pedagogical idea-sharing document	Online session	To understand the link between transformative learning and the selected film;	"...students making their own documentaries about a given subject..."
Semi-constructed interview	Semi-constructed interview	To develop suitable pedagogy of facilitating transformative learning by using the selected film.	"...for example, it is a historical movie, you can ask them to write down the differences compared nowadays, then ask them to observe the film to find out the differences..."

3.4 Data analysis

The data were analysed with the thematic analysis method. It can be found in the work of Braun and Clarke (2006), there is six steps framework for thematic analysis: (a) familiarise yourself with the data; (b) generate initial codes; (c) search for themes; (d) review themes; (e) define and name themes; and (f) produce the report (Braun and Clarke, 2006; Lawless & Chen, 2019). After merging the data and following this framework, nine initial codes were generated: 1) Effect of the film; 2) Message of the film; 3) Emotion of the film; 4) Execution of the film; 5) Educational value of film; 6) Pedagogy in film education class; 7) Understanding of transformative learning; 8) Film and transformative learning; 9) Pedagogy on transformative learning with the selected film. After searching and reviewing the themes, three themes were named a) Film analysis; b) Film in education; c) Film education on transformative learning. The example of raw data is displayed in Table 4:

TABLE 4. Example of raw data regarding themes and codes

Theme	Code	Example of raw data
Film analysis	1. Effect of the film	"The part where they were flying with the birds, it really summed up the idea of the film and it fit the narrative."
	2. Message of the film	"...the message is to start thinking about the future today and start acting the way you want that future to be like."
	3. Emotion of the film	"Visual form was very majestic and flamboyant which gave it that motivational speaker kind of sense."
	4. Execution of the film	"Music/sound effects were like the visuals, flamboyant. Her calming voice was fitting though."
Film in education	5. Educational value of film	"...by using film, you can visualize things that you cannot bring to classroom in other ways."
	6. Pedagogy in film education	"Sharing opinions with others because everyone has their specific ways to understand film."
Film education as transformative learning	7. Understanding of transformative learning	"Questioning and challenge the things that you understood before so that you get a new understanding, not just adding things."
	8. Film and transformative learning	"To use the film's content to teach the kids not always believe what they firstly think."
	9. Pedagogy on transformative learning with the selected film	"I would use this film as a way to let the student or pupil Figure out the message of the film for themselves."

4 FINDINGS

The findings of this study are presented in this chapter and categorised into three themes: 1. Analysis of the selected film; 2. Pedagogy study of film education; 3. The selected film and transformative learning.

4.1 *Analysation of the selected film*

Student teachers as the audiences expressed their views of the selected film from aspects of effect, message, emotion, and execution. In this section, the film is analysed according to these four aspects.

4.1.1 Effect of the film

The tone of the film is generally described as beautiful and calm. The audiences felt interested and moved by the film because of the storytelling methods, such as the close-up shots and the flashback narration. In addition, the audiences felt impressed about the topic of the film. The audiences were aware of the current issue between nature and human. These feedbacks indicate that the film induces the audiences to think about the topic.

“It was interesting because at first you didn’t quite understand what the situation of the film was and then at some point you realised who the narrator was and what the previous events were.” (participant 2, reflection note)

“The film was filmed really beautifully. I think the film proceeded clearly and calmly and was very impressive. The subject of the film was very interesting and important. The subject of the film made me think in general about the impact of man on nature and wildlife and how I can influence.” (participant 6, reflection note 6)

However, one of the audiences expressed a lack of engagement in the film because the narration tone caused pretentiousness.

“The film wasn’t particularly engaging. We felt overwhelmed by the seeming air of pretentiousness in the speaker’s narration and tone.” (participant 3, reflection note)

The most memorable aspect of the film is the nature and interaction between humans and birds (non-human). This aspect emphasises the topic of the film and guides the audiences to think about it.

“The interactions of birds and humans. Also, the situation the film portrayed of our time as being this great crossroads where we have to decide how we are going to act on these effects and problems we are facing and how our actions are going to affect the future.” (participant 2, reflection note)

“...the very last sentence where it was brought to the level of language that it wasn’t only about human effort to get birds back to living species, but it was also influenced by the birds.” (participant 4, reflection note)

Generally, the film brings a peaceful atmosphere to the audiences and builds up space for the audiences to clearly see through a picture of reality; simultaneously, it inspires the audiences to think about the topic.

4.1.2 Message of the film

According to the feedback from the audiences, the film's messages are varied. The variety depends on which angle do the audiences see the film. Three main messages are concluded from the views of the audiences. First, the film delivers a message about how human action of the present influence the future.

“I think the message of this film is to show viewers what our future is perhaps going to look like and how the actions we do today will have an impact on that future. Basically, the message is to start thinking about the future today and start acting the way you want that future to be like.” (participant 2, reflection note)

Second, the film conveys a message that the action of the former generation can have a significant impact and educational value on the next generation.

“The film was about her legacy, achievements and values and how it affected the narrator who was observing her. It was about life lessons she learned from her grandma and how it influenced her views in life in general. How she learned to fly through her.” (participant 1, reflection note)

Third, the film brings the message about cohabitation and collaboration between human and non-human and the relationship between human and

nature. Student teachers expressed that this message encouraged them to see all species in the world in an equal way and protect life.

“I think the purpose of the film is to make people think about their impact on wildlife and the balance of nature.” (participant 6, reflection note)

“...the impression was that it had the usual conservationist message about protecting endangered wildlife.” (participant 3, reflection note)

Besides, other messages come from the film—for instance, helping others who need help despite species and making things happen with a strong will.

“The film also encourages us to look for different ways to help.” (participant 6, reflection note)

“...living ones who needs help of another.” (participant 5, reflection note)

In general, the film conveys the main message about the mutual influences between human and human, human and non-human, and human and nature. This message encourages the audiences to think about the contemporary issue of the cohabitant between human and other species and nature.

4.1.3 Emotion of the film

The audio-visual form of the film is described as beautiful, majestic, and flamboyant. The audiences mainly felt motivated, enchanted and love when they were watching the film. There are three main emotional impacts that the film has on the audiences. First, the majestic and flamboyant scenes portray incredible landscapes, making the audiences appreciate nature and motivating them to protect it with actions.

“In the film there are majestic outdoor shots which portray great landscapes. These shots make you appreciate nature and start acting towards protecting it.” (participant 2, reflection note)

“...generally, aesthetically pleasing imagery, inspiring narration and music in key parts.” (participant 3, reflection note)

Second, some scenes of nature trigger the audiences’ imagination from a future perspective and make the audiences feel responsible for the sustainable development of nature.

“There are also shot of less lively areas and foggy skies without birds which acts kind of like a foreseeing to the future if we are going to keep acting the way we are now.” (participant 2, reflection note)

Third, the multiple forms of storytelling make the audiences feel encouraged. These forms of storytelling are the inspiring narration and the scenes of interaction between human and non-human. It gives the audiences the feeling of hope and love. Meanwhile, it raises the audiences’ sympathy with the close-up shots of following the birds’ live. As well, background music creates a peaceful feeling for the audiences.

“... Like motivational speaker was supposed to affect the one watching and make them think and reflect the meaning to their own life.” (participant 1, reflection note)

“The film was very beautiful, and I am glad that the ibis-birds were given help and they survived. The film made me want to help.” (participant 6, reflection note)

Overall, the audiences can gain inspiration, peace, and love from the film with the fabulous scenes of nature, the heart-warming interactions of human and birds, and the soft background music.

4.1.4 Execution of the film

The film influences the audiences by straightforwardly showing how the birds grow and how the caregivers nurse and teach the birds from close-up shots to macro scenery. It illustrates not only from the human perspective but also from the perspective of birds. It builds up several angles for the audiences to see the theme and emphasised the urge to save extinct species.

“Shots of outdoors as an amazing place full of life or an empty and dead landscapes together with the narrator’s story worked quite nice in my opinion. Also, there were many shots of the birds doing different things and the narrator’s story pictured them with almost human-like characters.” (participant 2, reflection note)

“It constructed by captivating pictures, and close pictures and showing the birds perspective.” (participant 5, reflection note)

On the other hand, the background music sets off a peaceful mood along with the warm and calm narration, which is in the past tense with a flashback way.

It guides the audiences to explore the whole story and attracts the attention of the audiences. It makes the viewers emotionally invested in the birds with the shots of personification.

“Narrative grew throughout the film; the past tense gave the feeling like she was talking about a very meaningful thing. She also spoke in warm, admiring way. Music/sound effects were like the visuals, flamboyant. Her calming voice was fitting though.” (participant 1, reflection note)

“You had to listen to the story to hear, who it is telling about, how will this end? And also fill in the gaps yourself (for example what happened in between the grandmother and the person telling the story)” (participant 4, reflection note)

The film's execution successfully attracted the audiences' attention during the film appreciation and led to the theme. The result indicates that the film guides the audiences to further explore the theme by creating a smooth and peaceful atmosphere, such as the narration with background music and the shots from the micro to macro view.

4.2 Pedagogy study of film education

This session presents the findings of the understanding of the educational value of films and the pedagogy in film education class from the perspective of student teachers.

4.2.1 Educational value of films

There are three main points found from student teachers' views in the sense of the educational value of films. These points suggest that, first, films provide an audio-visual way for learners to learn. Because films show the object in a multi-dimensional form to be understood, it appeals to those who favour a more visual style of learning so that their learning process is not limited by specific ways, such as reading in written text.

“You can get their attention; some kids will feel easier to learn when they see the picture. I think it's always more interesting for them from some kind of storytelling.” (participant 1, semi-constructive interview)

“It is a more vivid way to present a content. It can show a specific example by using film, kids can see it from film so that they can understand better.” (participant 6, semi-constructive interview)

Second, using films as additional material in class makes the teaching more sufficient and efficient. According to some practical experience of student teachers, abstract subjects, such as religion and culture, and some complicated topics were better taught through an audio-visual way than others.

“Using film could make teaching in more diverse ways, for example, in religion teaching, you cannot teach them without using film as visual tool.” (participant 1, semi-constructive interview)

“I think film can be a good mediation means when the topic is quite complicated, and you cannot present it in other forms.” (participant 2, semi-constructive interview)

Third, thanks to the execution of films, it generates emotions through storytelling methods and renders an atmosphere so that it can evoke learners' emotional sense. Films give learners a more immersive experience and make learners more engaged.

“...it is very emotional, and it is a very captured way for learners. For example, the light make you feel some way, the dialogue make you feel some way, in audiovisual language, it can make learners feel in many kinds of ways.” (participant 2, semi-constructive interview)

“Story can be taught in many levels, from children to adult. It has hidden message and emotion to help kids to emphasise others.” (participant 5, semi-constructive interview)

In general, films are valuable educational material for both learners and educators to improve learning outcomes. Films benefit learners by providing an audio-visual form. Meanwhile, it promotes teaching to be sufficient and efficient by delivering more objectives in a multi-dimensional form. Besides, Films engage learners by generating an immersive environment.

4.2.2 Pedagogy of applying films in class

With the benefits that films could bring into class, it is suggested several pedagogies can be practised to maximise the advantages of using films. First, educators guide learners to use audio-visual language to express their ideas. On

the one hand, it makes learners more engaged in the class. On the other hand, it respects the diversity of learners by giving some learners who favour a more visual style more options to show their thoughts more easily.

“It’s very exciting for them when they use a video to tell their ideas.”
(participant 1, semi-constructive interview)

“Some ideas can be easier to deliver by drawing... you should respect what is the best way for them to express.” (participant 2, semi-constructive interview)

Second, educators organise a discussion for learners to share their ideas to have broader thinking about the theme.

“Sharing opinions with others because everyone has their specific ways to understand film. It’s important to let them share how they think about the film.” (participant 1, semi-constructive interview)

“After watching film, we can discuss what happen in the film. Maybe take some shots and watch them again so that leaners can think more closely form that parts of film. We would discuss about ‘what is wrong’, ‘what is right’, ‘what would you do if you were in that situation’.” (participant 6, semi-constructive interview)

Third, educators encourage learners to create a different ending for the film and set up a “role play” session for learners to participate so that they can experience in person to get a deeper understanding of the topic.

“You can use “pencil-camera-pedagogy”, such as you ask kids to film a 30 secs video without a script (use the camera as a pen), or use camera or write a script, etc.” (participant 5, semi-constructive interview)

“You could use “acting” (role play), writing different kind of ending of the movie so that they can add the things they want.” (participant 2, semi-constructive interview)

4.3 The selected film and transformative learning

After exploring the general pedagogy of using films as educational material in the class, here shows the pedagogy for facilitating transformative learning with the selected film. The answers to three questions can be found in this session: 1. "How do student teachers understand transformative learning?". 2. "How do student teachers understand the relationship between films and transformative

learning?". 3. "What pedagogies would student teachers use to facilitate transformative learning with the selected film?".

4.3.1 Understanding of transformative learning

There are two kinds of understanding of "transformative learning" among student teachers. Most student teachers consider it is about changing the self and revoking the self into a better version by questioning and challenging the things that one understood from former knowledge. Instead of sticking to the current understanding of something, transformative learning encourages one to think out of the box by listening to other's opinions so that one can have more extensive thinking.

"Becoming a better version or new version of oneself." (participant 1, semi-constructive interview)

"Questioning and challenge the things that you understood before so that you get a new understanding, not just adding things." (participant 2, semi-constructive interview)

Still, some hold a different view on it; they consider transformative learning is about knowledge accumulating. It means developing the self further by gradually processing knowledge based on the existing knowledge and former experience.

"The willing to learn, you have to have former experience to process the new leaning. For example, you learn maths, you have to know 1 then 2 then 3, you have to use the former knowledge or experience to build something by processing it." (participant 5, semi-constructive interview)

It shows that student teachers have a deviation of defining transformative learning and the lack of comprehensive understating of it. They confuse the definition of "informative learning" and "transformative learning". In addition, it is found that different understandings of "transformative learning" resulted in different ways that student teachers suggested to facilitate it.

4.3.2 Film and transformative learning

The findings indicate that student teachers consider films are useful material as an auxiliary to facilitate learners' transformation. On one side, the execution of films builds up an accessible environment for learners to appreciate a film from different angles to guide learners to discover a new perspective. On the other side, the variability and accessibility of filmmaking provide a broad platform for learners to develop their ideas to get enlightenments by developing creation and recreation, namely learning by doing. Moreover, in line with transformative learning by double stimuli (Sannino, 2020), educators can guide learners to explore new insights into specific topics by using film in a classroom. Learners can understand better the conflict situation, which is a real-life scenery raised by the film, with a set of pedagogy, such as using plot-twist to guide learners to get the point, discussion, and film appreciation. At the same time, learners can take over the problematic situation with the auxiliary of second stimuli. These second stimuli include instructions of the educator and self-agency that awakened by the elements of the film, such as narration, closed-up shots, and sound effect.

“Sound effect, camera moving, etc. they all contribute how the sense is done in the movie so that it can influent the way how viewers to see.” (participant 2, semi-constructive interview)

“After watching film, we discuss how kids see the things in different ways. There are many ways to see it and think about it, then they understand others has their own way to see.” (participant 6, semi-constructive interview)

4.3.3 Pedagogy of transformative learning with the selected film

With the selected film, student teachers mainly focus on the topic of "species extinction", "climate change", "coexistence of human and non-human", and "sustainable development of nature". With a set of pedagogy, it is suggested that educators guide learners to explore specific topics from the film. As was mentioned in the previous session (4.3.2), learners could achieve transformation with the auxiliary of double stimuli. In this session, a set of pedagogy is pointed out.

There are two types of teaching goal mentioned by the student teachers. The first type focuses on the film production profession, which refers to film production skills, for example, guiding learners to observe how the film delivers the message through the professional technic used by the filmmaker. In terms of facilitation of the film production profession, it is suggested that before streaming the film, educators give tips on the film production technic and divide learners into a small group; second, educators assign each group a specific task of producing technic so that learners can concentrate on a particular skill or technic during film appreciation; third, after streaming the film, educators organise a discussion for discussing learners' findings and thoughts of the given topic and task, such as the skill of using sound effect and camera shooting technic, to develop a better way to produce the film. It is also suggested that educators should participate in discussion with all groups.

“Maybe do some preparing exercise beforehand, give the students some tips on what to put your focus on. For example, put them in groups and advice one group to focus on audio-visuals/storytelling and others in visuals and meaning/emotion etc. Then afterwards we could discuss their findings and thoughts and perhaps some alternative ways that could have been done to make the film even more effective.” (participant 1, pedagogical idea sharing)

The second type of teaching goal focuses on consciousness and self-awareness development. It means educators guide learners to explore the conveyed messages and the projected reality from the film and understating them in the context of their own experience with film literacy so that learners are more aware of themselves and the surroundings. Most student teachers tend to achieve the second type of teaching goal. It is recommended that educators streamed the film without the content introduction of the film so that learners can discover the topics themselves based on their understanding without limitation and intervention.

“I would use this film as a way to let the student or pupil Figure out the message of the film for themselves. In the beginning of the film you don't have much context or information about the situation being portrayed. As the film goes on you get a little more information piece by piece until you have a realisation on the concept of the film. I think this kind of learning is more powerful and memorable than more traditional and passive learning where the information is passed on from teacher to the student.” (participant 2, pedagogical idea sharing)

After film streaming, educators are recommended to divide learners into small groups and organise a discussion activity. During the discussion, educators are suggested to guide learners to acquire and apply film literacy. In other words, educators are needed to facilitate learners to read and write with audio-visual language while they are collecting learners' ideas.

“We watch a film with children (for example this one) and then collect their stories, ideas and reflection about it. We choose a topic based on their ideas that we will go study more. For example, could be so, that the act of helping birds would rise we study how we can help birds on our own area feed the during winter? what kind of food is good for the birds? follow birds that come to visit our “food market” study about these birds more (and squirrels that will also arrive).” (participant 4, pedagogical idea sharing)

Secondly, it is suggested that educators and learners discuss the chosen ideas based on learners' interests, with the reality and facts of life. Thirdly, educators are suggested to choose several activities as an auxiliary for learners to develop solutions for overcoming the problematic situation. Such activities are also considered the practice of film literacy. The activities can be thinking from a future angle, rewriting the transcript, creating, or recreating a part of the film and role play.

“I would use it so that the students or pupils would have to imagine what the future is going to be like when they are old and how they would like it to be. Then they would have to think what actions of their life nowadays are promoting their ideal future and what actions they could change for that future. I think that would help them understand that our actions have long lasting effects and everyone's actions matter. This will also enlighten that if we want to our future to be different, we have to start acting now.” (participant 2, pedagogical idea sharing)

“I think the story seen in the film could be dealt with the children, creating a new understanding, for example, by considering possible solutions to different situations.” (participant 6, pedagogical idea sharing)

The findings from this study mainly reflect the second type of teaching goal. The mediation process in film education class is in line with transformative learning by double stimuli (Sannino, 2020). It is shown that educators play a role in guiding learners to face conflicts and up-take control of the conflicts through the mediation with film in the film education process.

5 DISCUSSION

5.1 Evaluating the selected film as an example

In this the study, it shows that the selected film can be used to facilitate transformative learning. Using the selected film as an example, Figure 5 shows how to match the elements of a film and the related pedagogies for each stage of the integration model (Figure 2). It is considered the fundamental part of the evaluation framework.

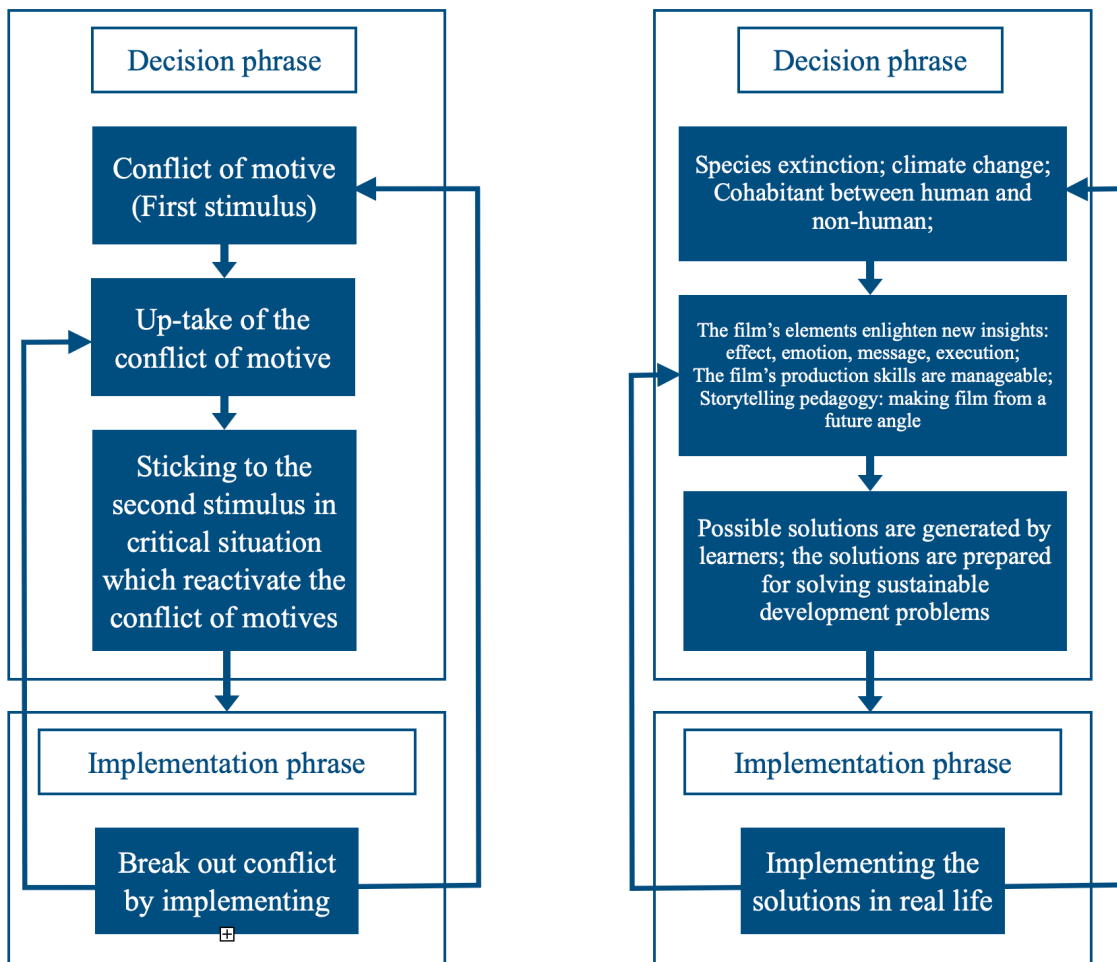


FIGURE 5. Example of matching the selected film's elements and related pedagogies for each stage of the integration model (Figure 2)

In the facing conflict stage (stage 1 in Figure 2), the conflict of motive, also known as the first stimulus, is raised by the mirror reflection of the film. The simulated reality scenery provided by the selected film refers to the real issue of climate change, species extinction and the cohabitant between human and non-human.

In the up-taking stage (stage 2 in Figure 2), through several activities with film literacy, such as film appreciation, discussion and storytelling, learners up-take the auxiliary, also known as the second stimulus, to gain control of the conflict. In other words, learners found possible solutions to conquer the conflict. Several elements can be found in the selected film as second stimuli that enlighten learners' new insights. They are, for example, the background sound effect, the emotion carried by the narration, the messages conveyed through the story, the flash-back narrative way, and the hypothetical angle from the future. The ways how these elements are shown through the film are the filmmaking skills. These producing skills are, for example, close-up shots, panorama, the control of the sound volume, and colour filter. Educators are suggested to evaluate if these filmmaking skills are manageable for the target group. For example, it may be hard for grade four students, while grade nine students may feel it is easy. With the film appreciation and discussion activity, learners understand the conflicts more profoundly and learn filmmaking skills. In this stage, the storytelling activity is emphasised. Educators are suggested to guide learners to make their films about climate change and species extinction or related topics from a future perspective. With the storytelling activity, learners can both practice the film producing skills acquired from the selected film by simulating the storytelling methods and generate new solutions by constructing their ideas.

The breaking-out stage (stage 3 in Figure 2) takes place in real life when a similar conflict happens. In this study with the selected film, the implementation refers to putting solutions into practice for sustainable development and balancing the cohabitant between human and non-human. The implementation phase strengthens learners' understanding of the problem and capacity to take

further action. It leads to the result that both the learners and the conflict situation are transformed.

As the results of this dual learning process, learners gain film literacy and storytelling skills; simultaneously, their awareness of transformative learning is improved so that learners are able to learn further independently and achieve self-transformation.

5.2 Linking film education with transformative learning

This study shows that the process of film education is in line with the transformative learning process based on the TADS model (Sannino, 2020). Achieving the teaching goal of facilitating transformative learning requires educators to select an appropriate film as educational material. The selected film should include two key factors. The one is conflict projection that brings up the first stimulus; the other is enlightening elements of the film that inspire viewers to develop new insights. Based on this study, the conflict projection can be some reality or daily life scenes. The enlightening elements are mainly manifested in the film's effects, message, emotion, and execution. However, the enlightening elements can also be shown in other aspects depending on different films, such as characters and plots.

According to the comprehensive study of the selected film through film appreciation and reflection, it shows that the selected film projected several real-life conflicts. These conflicts are, for instance, climate change, species extinction, cohabitant between human and non-human, and the relationship between human and nature. It brings the first stimulus in front of learners to lead learners to step into the process of the TADS model (Sannino, 2020). Additionally, the effects, message and emotion carried by the film enlighten viewers' new insights about the topics. Moreover, the film's execution gives viewers example and guidance to acquire certain storytelling methods to make their films. During the film appreciation and producing their films, learners can develop and improve their film literacy by practising; at the same time, it fosters their critical thinking. Based on the study with the selected film, educators are suggested to give more free

space for learners to view the film and find out the topics by themselves based on their understanding instead of telling them the content beforehand. In the mediation process, educators are recommended to organise several discussions about the film's topics and participate in the discussions, meanwhile, to give guidance for learners to read and write the audio-visual language. Personal film production, transcript rewriting, and role play can be the activities in the class. Thus, for providing a research-based reference for the further learning material associated with the selected film, the teaching subject can be ecology and environment. The pedagogy can be discussion and storytelling from a future perspective.

Moreover, the findings indicate that student teachers' understanding of transformative learning has deviation. The deviation is reflected in confusion between the meaning of transformative learning and informative learning. This confusion impacts how student teachers facilitate the process. Thus, in teacher education, it is necessary to deliver a more comprehensive concept and cultivate a more in-deep understanding of transformative learning to teachers. Only when educators understand it without deviation nor confusion can they promote transformative learning efficiently and effectively.

5.3 Evaluating a film as learning material to facilitate transformative learning with design-inclusive user experience research method

One of the aims of this study is to develop a framework to evaluate a film as educational material to facilitate transformative learning. In "design-inclusive user experience research", which is the applied research method in this study, the created artefacts themselves in the process of iterative and creative design are the outcomes of the research (Vermeeren, 2015). Therefore, the reflection note (Table 2) and the integration model (Figure 2) are developed as parts of the evaluation framework. Embedding the "design-inclusive UX research method" into the evaluation framework, the evaluation framework can be formulated as a five-steps evaluation framework for film education as transformative learning (see Figure 6).

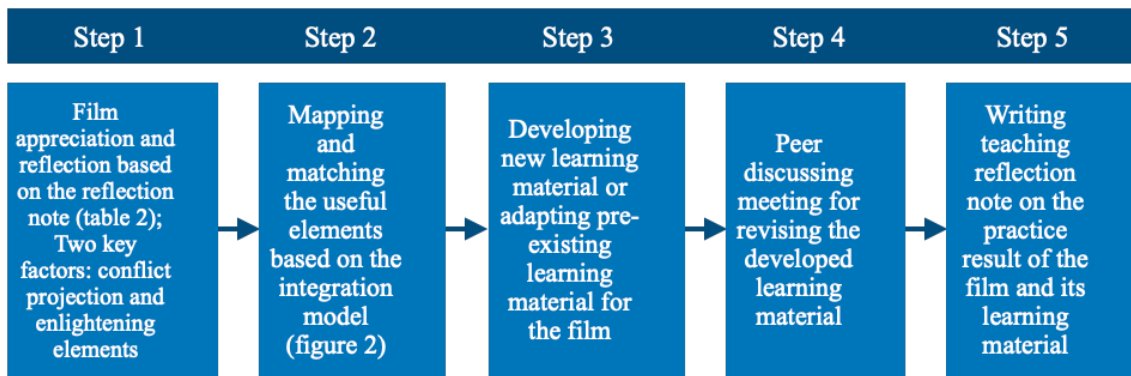


FIGURE 6. Five-steps evaluation framework for film education as transformative learning

Figure 6 shows that the evaluation framework developed in this study is formulated by combining the outcomes of this study, which are the reflection note (Table 2) and the integration model (Figure 2), based on the design inclusive UX research method. In the first step, educators critically appreciate the film based on the reflection note to determine the feasibility and possibility of using the film for facilitating transformative learning according to the two key factors, conflict projection and enlightening elements. In the second step, educators use the integration model to map out the useful elements and match the elements to different stages of the integration model. In the third step, educators design the learning material for the film if there is non-existing learning material; or adapt the pre-existing learning material based on their target groups. In the fourth step, educators organise a peer discussion meeting to study the related learning material and revise the learning material accordingly based on the collected feedback. In the fifth step, educators write a teaching reflection note regarding the actual class practice results of the film and its learning material. During the practice, educators are required to observe the students' reactions to the film and the pedagogy and evaluate the learning outcome. The teaching reflection note is the evaluation result of the efficacy and efficiency of the film as educational material and its learning material. The evaluation result is also the reference served to develop the learning material for the film further.

Furthermore, the design inclusive UX method can also be applied in the process of producing learning material of a film as a sub-line or inner circle of the

process of evaluation. It can be taken place as a sub-line or inner circle after matching film elements with the integration model (Figure 2) in the formulated framework of evaluation.

Due to the educational purpose of this evaluation framework, it is considered to evaluate a film for facilitating transformative learning. However, the framework can be adapted to serve other educational purposes with five main steps: 1. film appreciation and reflection; 2. matching mediation process; 3. developing learning material; 4. discussing the usefulness of the learning material; 5. reflecting the efficacy of the learning material from practice.

6 CONCLUSION

This study aims to link film education with transformative learning and develop a framework to evaluate a film as educational material for facilitating transformative learning. This study also contributes to providing a research-based systematic analysis of the selected film to create its learning material by using a selected film as an example for this research.

The findings show that film education and transformative learning share a similar learning process and can be integrated. To facilitate transformative learning with a film as educational material requires educators to evaluate if a film has conflict projection and enlightening elements. The evaluation can be started with writing a reflection note (Table 2) of film appreciation from five aspects, including effect, emotion, message, execution, and transformative learning. After writing the reflection note of a film, educators need to map out what elements of the film are related to transformative learning and how these elements can be matched to the integration model (Figure 2). With the clear map provided by the integration model, educators can design the related learning material for the film based on the target group.

However, the reflection note developed in this study is limited to five aspects of film appreciation to find out enlightening elements that can inspire transformative learning. Understanding a film more profoundly and comprehensively requires viewers to appreciate a film from more aspects, such as characters and plots. Hence, it is suggested that a more comprehensive reflection note of film appreciation for general use can be developed in future study.

Based on this study, the design-inclusive user experience research method is helpful in developing the evaluation framework and can be embedded into the

evaluation framework itself. For example, in this study, through the research process, a reflection note (Table 2), of which the purpose is finding out enlightening elements of the film, is generated and considered an essential reference to evaluate if the film is suitable to be used for facilitating transformative learning. In other words, the design of the artefact during the research is part of the outcomes of the study. With this design-inclusive user experience research method, educators not only are participants but also play the role of researcher. Instead of being given the information by a third party, such as instructions from education institutes, it provides educators first-hand and in-person experience to evaluate a film as educational material to have a comprehensive and in-depth understanding of a film.

Integrating the TADS model (Sannino, 2020) in film education provides a fundamental model for educators to map out what film's elements can be used and match them for different stages of the integration model (Figure 2). Combining the reflection note (Table 2), integration model (Figure 2) and the basis of the design inclusive UX research method formulates a new framework for evaluating a film as educational material for facilitating transformative learning. The evaluation framework provides a research-based systematic reference for educators to develop the appropriate pedagogy and related learning material of a film with the purpose of facilitating transformative learning.

Nonetheless, this study only completed "step one" of the "two-step approach" (Krueger, 2020) due to the time limitation. The efficacy of the formulated evaluation framework is to be proved by further study. In the future study, it is suggested that putting the evaluation framework into practice among educators to test its feasibility and efficiency by continuing the "step two" of the "two-step approach" to generate more insights into this evaluation framework to improve the positive user experience.

Furthermore, the user experience research method can also be used to develop new learning material for a film or adapt pre-existing material of a film. It can be taken place as a sub-line or inner circle after matching film elements with the integration model (Figure 2) of the formulated evaluation framework.

Due to the COVID-19 situation, the background of this study is online. However, it would be more beneficial if the process could occur in an actual natural environment because the film appreciation and discussion among educators play a critical role during the research. In an actual environment setting, educators and researchers can observe the emotional reactions with each other and share thoughts in real-time.

All in all, this study shows the link between film education and transformative learning and how these two terms can be integrated. A framework for evaluating a film as educational material for facilitating transformative learning is formulated. Also, the systematic analysis material of the selected film, such as the reflection note of the film and the suggested pedagogy of student teachers, provides a set of research-based reference for further developing the film's learning material. In the future study, it is suggested that putting the formulated evaluation framework into practice among educators to test its efficacy and improve its flaws by continuing the "step-two" of the "topic-specific two-step approach for user experience research method" (Krueger, 2020) so as to develop the positive user experience.

7 EVALUATION

This research followed the ethical principles of research with human participants and ethical review in the human sciences in Finland (Finnish National Board on Research Integrity TENK, 2019). First, retaining trust in the researcher and science is the fundamental starting point of research with human participants (Finnish National Board on Research Integrity TENK, 2019); therefore, respecting the human dignity and rights of the participants, the researcher had sent the invitation and the informed consent of this research to participants before the research was taken place. The invitation contained information on the study topic, schedule, and objectives of the online session. The informed consent stated the usage, analysis, and storage of the data and asked permission from participants to process the data collection and analysis. Participants had the right to participate voluntarily and to refuse to participate. Participants who were willing to participate in the research signed the informed consent and sent it back to the researcher by email. During the research, participants had the right to discontinue and withdraw their consent to participation at any time without suffering any negative consequences. All the information of participants was kept confidential. The information of participants was only stored in the researcher's computer in digital form. The personal information was removed from the research data in the data analysis.

Second, all data generated in this study are only kept on the researcher's computer regarding data storage and analysis. All data generated in this research will be permanently deleted after the master thesis is published. The data were analysed anonymously, participants' names were presented as numbers, such as "participant 1, participant 2, participant 3". The analysis of data and findings were reflected directly from the raw data objectively.

Third, the usage of intellectual material in this study followed the Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society (European Communities, 2001). Regarding the intellectual material, which refers to the selected film in this study, all the copyrights belong to the film production team, whose information (see Table 1) was presented in Chapter 3. Because this study is based on the collaboration with a film education institute, Koulukino, the film was selected from the sources as public educational material provided by Koulukino. The permission of using this film was authorised by Koulukino. The film was only used for study purposes within this study. The film was streamed via a shared link provided by Koulukino with a password on participants' computers. Participants were notified that sharing the link or the film in any form outside the study session was prohibited.

Due to the aims of this study and the characteristics of the research method, the evaluation framework developed in this study is considered suitable for educators' use to evaluate a film as educational material for facilitating transformative learning. However, it is also possible that students use the evaluation framework in their self-study. Because of the complexity and knowledge density of the evaluation framework, it is suggested that learners use the evaluation framework with the guidance of educators.

Because of the time limitation, the "topic-specific two-step approach for user experience research method" (Krueger, 2020) is not completed in this study. This study only generated the evaluation framework by applying the "step one" process. Therefore, the efficacy of using this framework in actual practice is to be proved by further study.

REFERENCES

- Annalisa Sannino (2020): Transformative agency as warping: how collectives accomplish change amidst uncertainty, *Pedagogy, Culture & Society*, DOI: 10.1080/14681366.2020.1805493
- Alheit, Peter. (2018). Biographical learning-within the lifelong learning discourse. *Contemporary Theories of Learning* Chapter 11. London: Routledge.
- Aveling, N. (2001). “Where do you come from?”: Critical storytelling as a teaching strategy within the context of teacher education. *Discourse: Studies in the Cultural Politics of Education*, 22(1), 35–48. doi: 10.1080/0159630012003974
- Bahbah, H. (1994). *The location of culture*. London. Routledge.
- Benmayor, R. (2008). Digital storytelling as a signature pedagogy for the new humanities. *Arts and Humanities in Higher Education*, 7, 188–204. doi: 10.1177/1474022208
- Becky Parry, & Jeannie Hill Bulman. (2017). *Film Education, Literacy and Learning*. UKLA.
- British Film Institute. (2003). *Look again! A teaching guide to using film and television with three-to-eleven-year-olds*. London.
- British Film Institute. (2015). *A FRAMEWORK FOR FILM EDUCATION*. Great Britain. <https://www2.bfi.org.uk/sites/bfi.org.uk/files/downloads/%20bfi-a-framework-for-film-education-brochure-2015-06-12.pdf>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. doi:10.1191/1478088706qp063oa
- Cope, B., & Kalantzis, M.(2000). Introduction – Multiliteracies – the beginnings of an idea. In B. Cope & M. Kalantzis (Eds.) *Multiliteracies. Literacy Learning and the Design of Social Futures*, (pp.3-9). London and New York: Routledge.

- D. Ashaver, S.M. Igyuve. (2013). The use of audio-visual material in the teaching and learning process in colleges of education in Benue State-Nigeria, *IOSR J. Res. Method Educ.* 1 (2013) 44–55.
- Elias, D. (1997) 'It's time to change our minds', *ReVision*, 20(1), 1: 3–5.
- European Communities. (2001). Directive 2001/29/EC of the European Parliament and of the council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society. *Official Journal of the European Communities*. Europe. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32001L0029&from=EN>
- Finnish National Board on Research Integrity TENK. (2019). The ethical principles of research with human participants and ethical review in the human sciences in Finland. Helsinki, Finland. https://tenk.fi/sites/default/files/2021-01/Ethical_review_in_human_sciences_2020.pdf
- Horvath, I. (2008). "Differences Between 'Research in Design Context' and 'Design Inclusive Research' in the Domain of Industrial Design Engineering." *Journal of Design Research (online)* 7 (1): 61–8
- Hopwood, N., and B. Gottschalk. (2017). "Double Stimulation 'In the Wild'." *Learning, Culture and Social Interaction* 13: 23–37. doi:10.1016/j.lcsi.2017.01.003.
- Kegan, Robert. (2018). What "form" transforms?. *Contemporary Theories of Learning Chapter 3*. London: Routledge.
- Mezirow, J. (1991). *Transformative Dimensions of Adult Learning*. San Francisco , CA: Jossey-Bass.
- Mezirow, J. (2018). Chapter 8: Transformative learning theory. *Contemporary Theories of Learning: Learning Theories: In Their Own Words (Second edition.)*. Routledge Ltd. <https://doi.org/10.4324/9781315147277>
- Lambert, J. (2010). *Digital storytelling cookbook: Elements*. Berkeley, CA: Center for Digital Storytelling.
- Lambert, J. (2013). *Digital storytelling: Capturing lives, creating communities (4th ed.)*. New York, NY:Routledge.
- Lawless, B., & Chen, Y. (2019). Developing a Method of Critical Thematic Analysis for Qualitative Communication Inquiry. *The Howard Journal of*

- Communications, 30(1), 92–106.
<https://doi.org/10.1080/10646175.2018.1439423>
- Potter, J., & McDougall, J. (2017). Digital media, culture and education :
 Theorising third space literacies.
- Petra Anders, Michelle Canon, Pernille Clemmensen, Ines Freitag-Amtmann,
 Johanna Rehak and Sarah Tiedeke. (2019). FILM: A LANGUAGE
 WITHOUT BORDERS RESEARCH REPORT. BFI, Vision Kino, Danish
 film institute. Creative Europe Media.
- Rainio, Minna & Roberts, Mark. (2020). To teach a bird to fly. Retrieved from:
<https://www.rainioroberts.com/to-teach-a-bird-to-fly> .
- Reed, A., & Hill, A. (2012). “Don’t keep it to yourself!”: Digital storytelling with
 South African youth. *Inter- national Journal for Media, Technology and
 Lifelong Learning*, 6(2), 267–278. Retrieved from
[http://seminar.net/index.php/component/content/article/75-current-
 issue/146-dont-keep-it-to-yourself-digital-storytelling-with-south-african-
 youth](http://seminar.net/index.php/component/content/article/75-current-issue/146-dont-keep-it-to-yourself-digital-storytelling-with-south-african-youth)
- Roy, C. (2016). Documentary Film Festivals : Transformative Learning,
 Community Building and Solidarity . [https://doi.org/10.1007/978-94-6300-
 480-0](https://doi.org/10.1007/978-94-6300-480-0)
- Sannino, A. (2015b). “The Principle of Double Stimulation.” *Learning, Culture,
 and Social Interaction* 6:1–15. doi:10.1016/j.lcsi.2015.01.001.
- Sannino, A., and A. Laitinen. (2015). “Double Stimulation in the Waiting
 Experiment.” *Learning, Culture, and Social Interaction* 4: 4–18.
 doi:10.1016/j.lcsi.2014.07.002.
- Sannino, A. (2016). “Double Stimulation in the Waiting Experiment with
 Collectives.” *Integrative Psychological & Behavioral Science* 50 (1): 142–
 173. doi:10.1007/s12124-015-9324-4.
- Stewart, K., & Gachago, D. (2016). Being human today: A digital storytelling
 pedagogy for transcontinental border crossing: Being human today. *British
 Journal of Educational Technology*, 47(3), 528–542.
- Tepla, B., Demnerova, K., & Stiborova, H. (2020). History and microbial
 biodeterioration of audiovisual material. *Journal of Cultural Heritage*, 44,
 218–228. <https://doi.org/10.1016/j.culher.2019.12.009>
- V.W. Dike. (1993). *Library Resources in Education*, ABIC Publisher, Enugu.

- Vygotsky, L. S. [1931] (1997). "The History of Development of Higher Mental Functions." In *The Collected Works of L. S. Vygotsky*, edited by R. W. Rieber, 207–219. Vol. 4. New York: Plenum.
- Vermeeren, R. (2015). Design-inclusive UX research: design as a part of doing user experience research. *Behaviour & Information Technology*, 35(1), 21–37. <https://doi.org/10.1080/0144929x.2015.1081292>
- Krueger, P. (2020). Guided User Research Methods for Experience Design—A New Approach to Focus Groups and Cultural Probes. *Multimodal Technologies and Interaction*, 4(3), 43–. <https://doi.org/10.3390/mti4030043>
- Kovanen, K. (2018). Transcultural perspectives in Teaching Children's Horror Films. *Seminar.net*, 14(1), 31–42.
- Rittel, H. W. J., and M. M. Webber. (1973). "Dilemmas in a General Theory of Planning." *Policy Sciences* 4 (2): 155–169.
- Roto, V., E. L.-C. Law, A. P. O. S. Vermeeren, and J. Hoonhout. (2011). "UX White Paper – Bringing Clarity to the Concept of User Experience." Outcome of Dagstuhl Seminar on Demarcating User Experience, Germany. <http://allaboutux.org/uxwhitepaper>.
- Zimmerman, J., J. Forlizzi, and S. Evenson. (2007). "Research Through Design as a Method for Interaction Design Research in HCI." In *Proceedings of CHI'07*, 493–502. New York: ACM.

APPENDICES

Appendix 1: Koulukino's leaflet of film appreciation guide

Film keys

Koulukino. (2020). Film keys, These key questions will help you start decoding any film. *Koulukino. Finland.*

[https://www.koulukino.fi/ckfinder/userfiles/files/Koulukino-Film-Keys\(1\).pdf](https://www.koulukino.fi/ckfinder/userfiles/files/Koulukino-Film-Keys(1).pdf)

