Reviewing Framework of Curriculum Implementation:
ASEAN Context

Netra Run
run.netra@nie.edu.kh
National Institute of Education,
Ministry of Education, Youth and Sport, Cambodia

ABSTRACT

The framework of curriculum implementation had been argued to be complex and vague since it was hard to identify how, what, and where to begin. This paper aims to review the framework of curriculum implementation in the ASEAN context on how the curriculum is formulated, prototyped, and implemented. Employing the integrative review approach of the conventional review paper, 27 articles (22 primary data and 5 secondary data) were collected from Google Scholar to form themes, sub-themes, and codes. The findings indicated that the curriculum is implemented into 5 main circles: (1) the planning and consultation circle is categorized into 5 elements: identifying core values and areas of knowledge, key knowledge and skills for learners, basic and relevant resources, practitioners and relevant stakeholders, and reviewing plan and consultation; (2) designing and development circle is classified into 3 elements: contents, pedagogies, and assessments; (3) the trailing and prototyping circle is covered by 3 elements: contents, syllabuses, and resources; (4) the implementation and communication circle is followed by 3 elements: gathering information, reflection, and possible changes; and (5) post-implementation and evaluation is classified into 4 elements: assessment and feedback, reflection and evaluation, making changes, and post-implementation and updates.

Keywords: ASEAN Context, Curriculum, Implementation,
INTRODUCTION

The curriculum is known as a set of subjects including aims, learning objectives, instructional models or syllabuses with pedagogical ideas, and assessments (Wilson, 2017; Young, 2014). The curriculum can also be understood as the program of the studies with specific goals, contents, and assessments (Flores, 2016). It is a main-driven platform to transform content knowledge into productive skills (Young, 2014). The educator has been employing the curriculum in many ways; for example, holistic curriculum which refers to the program of the studies to every student in the same grade level, full-subject based banding which refers to a group of contents or subjects that are suitable for a specific level of the students, and/or oriented curriculum which refers to specific contents or life-skill to shape the students for their work-life career (Flores, 2016; Ho & Lee, 2022; Humphries & Burns, 2015).

Similarly, the curriculum was classified into different types for the specific use of the context and purpose: “written curriculum, societal curriculum, hidden curriculum, null curriculum, phantom curriculum, concomitant curriculum, rhetorical curriculum, curriculum in-use, received curriculum, internal curriculum, and electronic curriculum” (Wilson, 2017, pp. 2-4).

![Figure 1. Types of Curricula (Wilson, 2017, pp. 2-4)](image-url)
As shown in figure 1, each type of the curriculum is defined for its function in school: 1) the written curriculum is understood as the program of the studies written by the school itself, 2) the societal curriculum is the informal curricula from the society, 3) the hidden curriculum refers to the rules, disciplines, or nature structured in the school, 4) the null curriculum is defined as certain things that are not taught in the school, but actually provide students with the habits or certain experiences, 5) the phantom curriculum refers to the content knowledge for the cultural awareness, 6) the concomitant curriculum is understood as the certain things that the students learn from the family, church, or people around, 7) the rhetorical curriculum is defined as the knowledge gaining from the school climate in policy or administration, 8) the curriculum in-use is the official subject or content for the official run in the school, 9) the received curriculum is described as the content knowledge that the student study out of the class, 10) the internal curriculum refers to specific subject or content driven for unique students, and 11) the electronic curriculum is understood as content-based electronic or online (Alsubaie, 2015; Charles & Boyle, 2016; Palupi, 2018; Wilson, 2017).

In designing the curriculum, three certain factors are required for its triangle. First, goals and contents that are aligned with education for future direction need to be achievable and time-manageable. The curriculum developer may consider future skills, employment, and technology that people need to fulfill their upcoming lifestyle. Second is the proper track in pedagogies, resources, materials, and environments to transform the content knowledge into productive skills. The pedagogy can be teaching and learning with resources and environments that encourage students to learn independently toward skillful people. Third is the assessment process that supports the students to reflect, assess, and evaluate their learning. This assessment angle plays an important role in informing the students a long way in their learning to see their strengths and weaknesses to continuously assess toward the achievement of the goal of the curriculum (Flores, 2016; Grant, 2018; Macalister & Nation, 2019).

However, designing the curriculum may need a specific framework to see how, what, and where it should start from the beginning of curriculum planning to rolling out of the curriculum and its review. The framework is to meet the specific context to some extent which is hard to contextualize for another context. It reveals the overall picture of curriculum development and its implementation with fewer indicators for the local implementation of the curriculum (Erstad & Voogt, 2018; Macalister & Nation, 2019; O’neill, 2015).

To deal with the problem above, this paper aims to review the framework of curriculum implementation in the ASEAN context guided by 5 core aspects of curriculum framework: (1) planning and consultation, (2) design and development, (3) trialng and prototyping, (4) communication and implementation, and (5) post-implementation and evaluation (Erstad & Voogt, 2018; Grant, 2018; Kheng, 2023).
RESEARCH METHODOLOGY

This paper employed the integrative review approach under the mainstream of the conventional review paper in which the answers of the subject matter are collected from secondary sources with systematic, critical, and selective format to form a new framework (Schick-Makaroff et al., 2016). This integrative review approach involves seven major steps: 1) forming the questions of the subject of interest, 2) defining the subject matter, 3) recruiting core articles 4) consulting with related sources, 5) grouping main themes and sub-themes, 6) describing the grouped themes, and 7) proofing limitations (Cronin & George, 2023; Toronto, 2020).

The heterogeneity of purposive sampling was employed to select the articles under 5 criteria: 1) ASEAN context, 2) curriculum development of general education, 3) primary or secondary sources, 4) 10 years of publication at most, 5) articles in the Google Scholar due to limited sources of license search engines.

Table 1. Status of The Articles Extracted from Google Scholar

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Articles</th>
<th>Status</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brunei</td>
<td>2</td>
<td>2 PD</td>
<td>2019, 2015</td>
</tr>
<tr>
<td>Cambodia</td>
<td>2</td>
<td>1 PD &amp; 1 SD</td>
<td>2019, 2018</td>
</tr>
<tr>
<td>Indonesia</td>
<td>3</td>
<td>2 PD &amp; 1 SD</td>
<td>2020, 2015, 2014</td>
</tr>
<tr>
<td>Laos</td>
<td>2</td>
<td>1 PD &amp; 1 SD</td>
<td>2015, 2014</td>
</tr>
<tr>
<td>Malaysia</td>
<td>3</td>
<td>2 SD &amp; 1 SD</td>
<td>2021, 2017, 2014</td>
</tr>
<tr>
<td>Myanmar</td>
<td>2</td>
<td>2 PD</td>
<td>2020(2)</td>
</tr>
<tr>
<td>Philippines</td>
<td>3</td>
<td>3 SD</td>
<td>2023, 2020, 2018</td>
</tr>
<tr>
<td>Singapore</td>
<td>3</td>
<td>3 SD</td>
<td>2021, 2018, 2017</td>
</tr>
<tr>
<td>Thailand</td>
<td>2</td>
<td>2 SD</td>
<td>2020, 2014</td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>3</td>
<td>3 PD</td>
<td>2023, 2021, 2017</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2</td>
<td>1 PD &amp; 1 SD</td>
<td>2018, 2016</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
<td><strong>22 PD &amp; 5 SD</strong></td>
<td><strong>2014-2023</strong></td>
</tr>
</tbody>
</table>

Note: PD = Primary Data, SD = Secondary Data

27 papers of the ASEAN member states (11 countries, including Timor-Leste as an indicating ASEAN member state) were selected for the study. 22 papers are primary sources, and 5 papers are secondary sources. The years of the paper's publication varied from 2014 to 2023 (see Table 1). To analyze the data, the thematic approach was employed to form the hierarchized themes and sub-themes into five steps “compiling, disassembling, reassembling, interpreting, and concluding” (Castleberry & Nolen, 2018, p. 2).
RESULT AND DISCUSSION

The data on the framework of curriculum implementation in the ASEAN context from the 27 papers were grouped into themes as follows:

Planning and Consultation

Seven of 27 articles mentioned that the development of the curriculum starts with specific goals that are aligned with government direction. Curriculum planning also includes core values and competencies to equip the students with future skills and jobs. The curriculum developer may start planning five phases: (1) identifying core values and areas of knowledge, (2) key knowledge and skills for the learners, (3) basic and relevant resources, (4) practitioners and relevant stakeholders, and (5) reviewing plan and consultation (see figure 2) (Akib et al., 2020; Draper, 2015; Mappiasse & Sihes, 2014; Matzin et al., 2015).

Core values play a role as the starting point to collect important values for the learner’s practice in a real-world context. Core values of general education, for example, may include self-development, critical thinking, communication skills, concerned citizens, and leadership skills. They provide the practitioners with clear direction on what specific value the student might be able to achieve at the end of the course. The value can be soft skills, interpersonal skills, or ways to work and live together in the community (Chew et al., 2019; Khandavty et al., 2014; Ohajionu, 2021). Moreover, the area of knowledge is defined as the specialized skill that the student can employ for the institution or organization. It includes talent from birth or specific skills (maths, engineering, design, painting, teaching, banking, farming, technology, or other skills) that the student gains from the school both formal and informal tracks. The skill included in the curriculum is to prepare the student for the future labor market, at least for another 4-6 years or even 10 years or more, since the curriculum needs time for the implementation, reflection, review, and evaluation of its effectiveness. The skill can also be a need in the current labor market. In this case, the school that designs the course, especially the educational vocational training center, may cooperate with the institutions, organizations, or companies to examine the needs of new skilled workers. In addition, the current labor market can be a prioritized topic to figure out, using statistical data, for the fulfillment of a framework on up-to-date areas of knowledge (Barghi et al., 2017; Barrot, 2019; Palestina et al., 2020; Sisman & Karsantik, 2021).

Key knowledge and skills for learners are defined as the prioritized knowledge and skills among the collective batch of its framework and the course designer discusses among the team to choose key knowledge and skills that they want the students to learn. Selecting key knowledge and its level is the direction toward course and syllabus design in the which course designer can demonstrate what area or goal is to be achieved after the course. The selection of key knowledge and skill can be identified into three pictures: (1) global changes in the
labor market (internal level), (2) comparison to where the country, organization, or institution is moving toward (national level), and (3) needs of the current labor market (community level). A group of people with a common specialized subject shares their perspectives in categorizing subjects to decide on the key area of knowledge and it is aligned with the national direction in human competency development (Abejuela et al., 2023; Ogden, 2017; Sisman & Karsantik, 2021).

The resources of the curriculum are known as the mechanism to make curriculum progress, people, syllabus, textbook, school environment, budget, and timeline. People who are involved in the process of curriculum planning can be teachers, school principals, content experts, and stakeholders. The textbook is a core resource for the whole picture of the curriculum since the student’s learning process is dependent on the contents, knowledge, and skills stated in the textbook. In this case, the syllabus is a guide to help the teachers and students with a clear direction that they need to practice collaboratively, using productive teaching activities toward achievement (Phan et al., 2016). Additionally, budget is another core point in which the course designer is to be aware of such kinds of main activities that need budget support with precise timelines under the supervision of an assessment report (Hall & Gaynor, 2020; Hardman & A-Rahman, 2014).

Planning curriculum is the involvement of content experts and practitioners. The content experts, designing content in the textbook, may seek feedback from teachers, students, and stakeholders to see if the content is consistent, relevant, and reliable (Matzin et al., 2015). In this case, the partnership and stakeholder can also provide feedback to further strengthen the content of textbooks and teaching-learning activities and its extension that the environment could play a formative role in assisting students’ learning (Hairon et al., 2018; Htet, 2020).

The revision of curriculum planning can be done in three ways: (1) step-by-step revision, (2) mid-plan revision, and (3) final revision. The changes in the aims, objectives, contents, activities, and core elements can be made step-by-step. By doing so, the designer could update the plan accordingly based on the inputs of the relevant people. The mid-plan review provides core information on how planning can move on to another phase before moving on to design and development. The mid-plan review informs the course design of such adjustments to be made after the mid-plan reflection (Barrot, 2019; Palestina et al., 2020). In addition, the final review of curriculum planning provides the whole picture of the course design with strengths and weaknesses. This final revision in planning makes progress, modification, and reflection in the curriculum on what to change, what to keep, and what to continue (Aburatani et al., 2020; Barghi et al., 2017; Ogden, 2017).

**Design and Development**

Eight of 27 articles mentioned that curriculum design is triangular, consisting of three elements: contents, pedagogies, and assessments. Of course,
the content must hit the point to achieve a desirable goal. The content can be inside and outside the textbook where the students are encouraged to learn toward the achievement the creativity. The content must be clear, meaningful, and productive in terms of engaging and supporting students in their learning journey (Abejuela et al., 2023; Hairon et al., 2018; Sun, 2019). The content is not just how to do things, but it is also how to evaluate and create new things or new production. For example, the content of a technology class engages the students in how they can structure the design to build a house. The students are allowed to work in groups to build a tiny house using the resources they have and the idea of group design. This example indicates that the student learns new knowledge from the content and they socially construct knowledge from their peers to build a house (Opertti et al., 2018; Prihantoro, 2015).

Transforming content knowledge into the students is the starting point to syllabus design. The syllabus is divided into three types: (1) syllabus for teaching and learning, (2) syllabus for teaching and learning guide, and (3) syllabus for examination or assessment (see figure 2). The syllabus for teaching and learning involves the pedagogies and teaching strategies on how to get the students to construct their new knowledge (Draper, 2015; Hardman & A-Rahman, 2014; Kanhthavy et al., 2014). Fifteen of 27 papers stated that constructivism teaching theories by Vygotsky and Piaget can be applied to the classroom context to get the students engaged and build their knowledge collaboratively. The idea is to get the student to think and feel curious called the zone of proximal development and work together cooperatively to evaluate and formulate new things or new ideas called more knowledgeable other (Barrot, 2019; Chew et al., 2019; Hall & Gaynor, 2020; Ohajionu, 2021).

Teaching and learning activities that build a collaborative environment may include think-pair-share, problem-based learning, peer teaching/review/reflection, collaborative research, simulative games, flipped classroom, collaborative digital activity, concept maps, problem-solving and critical thinking activities, workshop projects, case-based learning and project-based learning, Socratic seminars, and communicative approach (Barghi et al., 2017; Palestina et al., 2020; Sisman & Karsantik, 2021). These kinds of collaborative activities allow the students to independently learn toward the autonomous learner. The students also put themselves into real practice and it is a proper track that they can develop critical thinking, decision-making, and social associating (Aburatani et al., 2020; Hardman & A-Rahman, 2014; Tan et al., 2017).

Working in groups for a collaborative task can be complex and challenging. In this case, assigning a role for the student in the group is one of the solutions to make sure that everyone is accountable for their responsibilities. For example, a group of students consists of five members: one group leader, one note-taker, one information provider, one communicator, and one presenter. Everyone plays a major part in the group to cooperatively finish the task. This is known as a way to
get students into real-life activities and it is what the course is expected (Abejuela et al., 2023; Ogden, 2017; Phan et al., 2016; Quinn, 2021).

In addition, the assessment is a crucial part of the design and development of the curriculum since it provides the progress of student’s assessment for learning, assessment as learning, and assessment of learning (Hall & Gaynor, 2020; Htet, 2020; Phan et al., 2016). The assessment can be divided into three types: prior assessment, formative assessment, and summative assessment. At the beginning of the course, the students are tested to figure out their existing or prior knowledge so that the lesson design for the class can be flexible in terms of students’ levels and learning styles. During the course, the students are assessed continuously to help them along the way of learning (Chansamut & Piriyasurawong, 2014; Tan et al., 2017). At this stage, the formative assessment is to support the student in strengthening their abilities by developing prior knowledge into working memories and from working memories into new knowledge or long-term memories in other words. Moreover, the summative assessment is placed at the end of the course to examine how much the students have achieved. The summative assessment can also help the course designer reflect on the strengths and weaknesses of the course itself as well as the outcomes of teaching and learning (Barrot, 2019; Chansamut & Piriyasurawong, 2014; Hardman & A-Rahman, 2014; Khantavy et al., 2014).

**Trailing and Prototyping**

Trialing of the curriculum is known as the pilot stage in which contents, syllabus, textbooks, instructional materials, and relevant supplements are well-designed and well-accepted by the committee and decision-makers (Akib et al., 2020; Opertti et al., 2018). Curriculum trialing may start with suitable schools or a group of students that fit the criteria of trialing, for example, it can be the school with good passing rates, a good learning environment, enough resources, and well commitment to seeking new changes. During the trialing process, teachers are trained in terms of new changes in the curriculum, syllabus, materials, and relevant supplementary (Khanthavy et al., 2014). The training may involve not only teachers, but also the school principals, master teachers, and stakeholders, working closely to support the school (Akib et al., 2020; Draper, 2015).

In addition, the prototyping is understood as ongoing support to make sure that the teachers and other key practitioners can work together on the right track toward the common goal (Ohajionu, 2021). The prototyping assesses the teachers in using convenient strategies of teaching and how to use instructional materials properly in terms of new changes in the curriculum (Hall & Gaynor, 2020). In this case, the teachers can be invited for teaching demonstrations to seek challenges, weaknesses, and possibilities for improvement. Prototyping of the curriculum is categorized into 3 phases: (1) training or workshop for the teachers and key practitioners, (2) assessing teachers to make sure that they are ready for changes,
(3) prototyping of the curriculum (Barrot, 2019; Quinn, 2021; Sisman & Karsantik, 2021).

**Implementation and Communication**

The implementation of the curriculum is defined as rolling out of the curriculum into the school or classroom for new changes (Mappiasse & Sihes, 2014). As the teachers and schools are ready for a new curriculum or a new course, the roll-out of the new curriculum is under the eye of the curriculum committee to see if they need help. The implementation may start at an early grade level (Draper, 2015; Ohajionu, 2021). For example, the primary level may start a new curriculum in grade one, and then continue to grade two when the students pass on to the next level. Doing so, the new curriculum is on track without conflict between the old and the new curriculum.

Moreover, a mid-term review can also be conducted at this stage to seek feedback from teachers and key practitioners (Aburatani et al., 2020). Having collected the information by school visit, observation, revisiting of the syllabus and textbook, and responses of the key practitioners, the mid-term review is a reflection session in which content experts, key practitioners, and relevant stakeholders come together to find challenges and possible changes in the curriculum. The mid-term review can be categorized into three steps: (1) gathering information, (2) reflection session, and (3) possible changes (Aburatani et al., 2020; Barghi et al., 2017; Chansamut & Piriyasurawong, 2014; Tan et al., 2017). The possible changes refer to the suitable update on the textbook, syllabus, teaching guide, and instructional materials that are implementing. The designer prefers not to change at this stage. This may produce bias in the implementation. Chansamut and Piriyasurawong (2014) and Quinn (2021) mentioned that it would be better to wait until the final review and make changes. The designer may take notes of feedback, suggestions, and important changes and then ask for clarification during the mid-term review and these will be able to change in the final review.

During the implementation of the curriculum, the communication among the content experts, key practitioners, and relevant stakeholders is to check on (1) the planning of the curriculum, (2) consultation on textbook, teaching guide, syllabus, instructional materials, teaching hours, and curriculum process, (3) notation of changes and improvement, (4) preparation on additional resources of changing points, (5) additional training (6) evaluation of mid-term review. This communication process provides spaces for the content experts and the practitioners to consolidate errors during the mid-term implementation and the ideas of making changes in the curriculum toward the final review (Aburatani et al., 2020; Chansamut & Piriyasurawong, 2014; Draper, 2015; Hardman & A-Rahman, 2014).
Post-implementation and Evaluation

Post-implementation is known as a full set of the curriculum after many revisions, evaluations, and approval from the committee and decision-makers (Akib et al., 2020). Before the post-implementation of the curriculum, there is a final revision, covering all single aspects, errors, and notes of changes from the content experts and key practitioners in terms of the planning, table of contents, textbooks, syllabus, teaching guides, instructional materials, and other supplementary books. As shown in Figure 2, the final review may come into 4 circles: (1) assessment and feedback, (2) reflection and evaluation, (3) making changes, and (4) post-implementation and updates (Draper, 2015; Hardman & A-Rahman, 2014).

Figure 2. Summary of Curriculum Framework

The assessment and feedback involve challenges or errors that occur during the implementation. For example, they have a lack of facilities, issues in the role of leadership, obstacles in teacher’s strategies in a particular topic, inconsistency of lessons, errors of diagram/pictures/images, out-of-date information, or word use. The final review also checks on the assessment of how the teacher assesses student’s learning in summative and formative ways (Chew et al., 2019). In a formative way, it is important to revisit the rubric and assessment criteria in terms
of scoring and elements of evaluation. The test and examination for the summative assessment also need to be revisited to see its validity and reliability. By seeking feedback from the key practitioners, updates to the curriculum can be more justified between expected outcomes and inputs of the learners (Barrot, 2019).

The reflection from the practitioners provides the specific areas on what and where the designer needs to revisit and make clarification. The reflection can be an open-discussed session to identify problems and possible solutions (Ohajionu, 2021). The reflection in this stage aims to evaluate if certain points need to be revised or need some additional supplementary. In addition, the evaluation can be the comparison between the subject matters and KSA (knowledge, skills, attitudes) as a means of examining the student’s achievement (Chansamut & Piriyasurawong, 2014; Palestina et al., 2020). In other words, the reflection and evaluation also revisit the structure of rolling out the curriculum itself what to take in more, what to modify, and what to adjust (Barghi et al., 2017; Hardman & A-Rahman, 2014).

Moreover, making changes in the final revision is the collective information and practices of every practitioner for the update of the curriculum. The changes may include a table of contents, textbooks, syllabus, teaching guide, supplementary, and other resources (Chansamut & Piriyasurawong, 2014; Tran et al., 2018). The number of changes can be found based on the feedback and real practices in the classroom. The errors can be found regularly in terms of spelling, word use, meanings, pictures, and inconsistencies (Quinn, 2023). Changes in the final revision can be the impact of the implementation and collective information along the way of practices by revisiting the supportive framework of the curriculum, packages of resources, communication plan, and continuous professional development of the teachers and key persons (Htet, 2020; Phan et al., 2016).

The last step of the curriculum implementation is known as the post-implementation which means that the package of the whole curriculum is all set through reflection, revision, evaluation, and update (Chansamut & Piriyasurawong, 2014; Ohajionu, 2021). In this step, the curriculum can be rolled out in the schools or classes in general. The errors, even the smaller ones, may not be found in this step. For example, the instructional material for a particular course may include textbooks and workbooks, teaching and learning guides, teaching aids and supplementary, models in teaching and learning, audiovisual materials, posters, and instructional resources (cards, animations, stickers, digital tools). These packages of instructional materials are well-checked and well-organized and they have gone through real classroom practices many times. Even though the curriculum is posted officially after the official approval of the committee and decision makers, it is significant to open for more updates. These updates would be made after another mid-term and final revision as the second circle of major revisions (Chew et al., 2019; Hall & Gaynor, 2020; Tan et al., 2017).
CONCLUSION

The framework of the curriculum implementation is categorized into 5 main circles: (1) planning and consultation, (2) design and development, (3) trailing and prototyping, (4) implementation and communication, and (5) post-implementation and evaluation. The planning and consultation circle covers What, Why, When, and Where (4Ws) to start the curriculum as the design and development circle reveals how to process 4Ws through contents, pedagogies, and assessments. The trailing and prototyping attempts the first rolling out of the curriculum in an appropriate school or a group of students to see if it works, and the implementation and communication circle modifies how it works for improvement. After the first round of curriculum implementation, the post-implementation and evaluation circle makes the official rolling out of the curriculum and it comes to reflection and evaluation for another planning and consolation in the second round and so on.

However, this finding remains on surface flows of the curriculum implementation, especially textbook evaluation, concrete syllabuses and pedagogies in constructivism, and assessment criteria since data were collected from only 27 papers on the ASEAN context in Google Scholar. The next paper may explore more on each circle of the curriculum implementation to see its weaknesses and possible solutions.

REFERENCES


Toronto, C. E. (2020). *Overview of the integrative review*. [https://doi.org/10.1007/978-3-030-37504-1_1](https://doi.org/10.1007/978-3-030-37504-1_1)

Tran, L. T., Le Thanh Phan, H., & Marginson, S. (2018). The ‘advanced programmes’ in Vietnam: internationalising the curriculum or importing the ‘Best Curriculum’ of the West? *Internationalisation in Vietnamese higher education*, 55-75. [https://doi.org/10.1007/978-3-319-78492-2_4](https://doi.org/10.1007/978-3-319-78492-2_4)
