



Analysis of Arabic as a First Language Acquisition Syllabus Reform in one of the UAE Universities

Fatema Ebrahim Al Awadi¹

Higher Colleges of Technology, P. O. Box 4792, RAK, UAE

* falawadi@hct.ac.ae

Abstract

Arabic as a first language: principal and pedagogy is a syllabus reformed in one of the UAE federal colleges as one of the Education program courses. A concentration on such as syllabus is formed as a result of own experience in the curriculum design and development filed. The main aim of the research is to evaluate and analyze Arabic as a first language syllabus reform. The research methodology implemented follows the theoretical method and the horizontal approach to evaluate the syllabus by using the CIPP curriculum evaluation model. This model entails the evaluation of context, input, process and product of the designed course. The syllabus evaluation revealed the achievement of the three stated research objectives and drew some recommendations. The first result of the evaluation is that the syllabus is well designed and is matching its theoretical underpinning and approaches, so it helps to construct knowledge, designed according to student-centeredness tasks, implies Helda Taba's model of curriculum reform, progresses based on Bloom's Taxonomy and fits the context of higher education. At the same time and based on the CIPP model, it proves its effectiveness as a course in terms of skills building, application, assessments and evaluation. Some recommendations also resulted from the evaluation and responded to third research objective such as, adding further formative assessment weekly, reshaping the practicum tasks to fit the online practicum situation and involve students in curriculum planning. The study was concluded with some recommendations for future research which may consider using qualitative data to support the evidences of the syllabus appraisal. Another recommendation is to measure the impact of student's input, survey of course satisfaction and curriculum development meetings on the course change.

Keywords curriculum, syllabus, Helda Taba model, CIPP model

1. Introduction

Curriculum development and reform is considered an essential routine in all educational institutions to keep up with current updates in the teaching and learning system. My interest in syllabus development and reform is formed by my experience in curriculum enhancements in higher education, especially reforming curriculums that fit current changes in the major or meet specific institutional standards. Hence, this research will consider an analysis of one of the Education division syllabuses developed in one of the UAE federal institutions. This syllabus is newly designed and is intended to be taught during the 2021-2022 Academic year as one of the level 1 courses in the Education division. This course syllabus is created to match the current requirements of changing the major into ECE (Early Childhood Education) and to be aligned with MOE ECE

© The Author(s) 2023

A. Johnston et al. (eds.), *Proceedings of the HCT International General Education Conference (HCT-IGEC 2023)*, Atlantis Highlights in Social Sciences, Education and Humanities 13, https://doi.org/10.2991/978-94-6463-286-6_16

standards. Unlike most of the courses in the division delivered in English, this course will be taught using the Arabic medium as one of the newly planned courses in the division delivered in Arabic. The main aim of Arabic as a first language syllabus is to prepare future teachers to understand how children acquire the Arabic language as their mother tongue. Hence, this course completes the work done in other courses about child development theories and English as first language acquisition.

The first rationale behind selecting this syllabus to be analysed in this research is that curriculum development is one of my assigned duties as a team leader in the education division. Therefore, this syllabus is one of the courses that I lead as a team leader to create and develop to match the program requirements (Dehghani, Pakmehr & Sani 2011). Second, this research will support curriculum planners and teachers and enhance understanding regarding the main methods and ideas used in curriculum reform, which require a long process and more thoughts regarding teaching and learning (Shawer 2010). A third justification is that this syllabus considers how the students will be assessed and identify whether the planning of that syllabus leads to determining what the CLOs are supposed to measure (Onwu & Mogari 2004). Additional reason is to implement related theories and methods acquired related to curriculum innovation, and consider how this is going to be beneficial for curriculum planners in higher educations (Shawer 2010).

This paper aims to analyse and evaluate Arabic as a first language acquisition syllabus structured in one of the UAE federal institutions' education divisions. Thus, the following research objectives are stated to help understand this curriculum reform:

- Understand the syllabus components through the underpinning theories and approaches' lens
- Measure the curriculum effectiveness for teaching and learning of higher education teachers and students.
- Draw recommendations on curriculum reform based on the theoretical analysis of the document

This research document includes six sections, which starts with the introduction discussing the outline of the syllabus and the rationale behind its selection for the analysis. The second section considers different literature to form a research foundation to analyse the document, entailing curriculum planning and reform theories and approaches. The following section will consider the research methodology implemented based on theoretical perspectives. A detailed overview of the syllabus will be outlined afterward, followed by the data analysis and discussion of the document. After that, a critical reflective discussion will be made based on the previous section's analysis. Finally, the research will be concluded and provide recommendations at the end.

2. Literature Review and Theoretical Underpinning

This section will discuss the related literature and the theory underpinning the Arabic syllabus reformation research analysis. Additional attention will be considering the theoretical and historical research, which will lead to shape the study framework (Slavin 2014). Hence, it attempts to review recent and valuable literature to support the understanding of the theory and approaches related to curriculum development and innovation. The section will discuss Social-Constructivism theory in curriculum planning, learner-centered model, Hilda Taba Model, Bloom's Taxonomy in curriculum planning, and finally will discuss the curriculum's implementation in higher education.

2.1 Social Constructivism Theory in Curriculum Development

The Social Constructivism theory is based on the notion of the Disequilibrium process of balancing between the previously acquired knowledge and the new concepts, leading to notable cognitive development (Slavin 2014). It focuses on constructing meaning and raising the learners' understanding to higher levels of thinking. Therefore, educators should determine what the students already know and build on their understanding through effective practice (Amineh & Asl 2015). Similarly, Social Constructivism theory requires agents such as teachers and caregivers to facilitate the process of knowledge construction. Those human agents are responsible for designing activities and tasks that reflect levels of complexity within a well-prepared educational environment, which challenge learners' thinking and motivate them to build ideas related to the introduced concept (Doubleday et al. 2015). However, implementing this theory in curriculum development requires acknowledging learners' context and culture to reduce practical challenges and over-generalization (Hång et al. 2017). In addition, the representation of information in a constructivist classroom requires the learners to follow more inquiry learning rather than being taught the new learning explicitly. This can be done through a problem-solving experience and experimenting ideas, because the curriculums are well prepared for such learning and the instructor is considered a facilitator during that experience (Duffy & Tobias 2009).

In addition, an essential component in social constructivism is the interaction and effective collaboration happening between learners, which is happening through designing authentic materials, teacher's clear guidance and learners' competence to develop interaction with other classmates (Shawer 2010). Another significant role of the curriculum and teachers within the constructivist classes is to constantly assess the activity's effectiveness in gaining knowledge, which can be done by reinforcing students' questioning to enable the active learning process (Brandon & All 2010). Another essential component in this theory is to provide effective feedback on students' performance and reflect on their own learning (Valdez & Reed 2020).

2.1.1 Learner-Centred Approach

The learner-centered approach is where learners are considered active learners and is more students' oriented than teachers'. Therefore, researchers indicated that curriculums planned to have the learners as the centre of learning are more effective and outcome-oriented (Kaya et al. 2012). One of the major elements of this approach is that it is based on students' cooperative learning, which is also named learner-centered or peer-led team learning as they assist each other in constructive comprehensive meaning (Zain et al. 2012). Learner-centered enhances learners' motivation, metacognition, social communication and individual difference, which can be impeded not only in face-to-face classrooms but also in e-learning and if the curriculum prepares everyone for that experience (McCombs & Vakili 2005). Furthermore, learner-centered is highly recommended in higher education, mainly in planning curriculums that revolve around students' learning needs and capabilities. Hence, they can apply their learning through assessments and actual experiences (Rodrigo 2017). On the other hand, the learner-centered approach is indeed playing a crucial role in shaping the lesson outcome, it also requires more time to structure and implement activities that consider this approach (Wolpaw et al. 2003). One of the essential aspects is to implement the learner-centered method consistently, and train teachers on how effectively they can involve learners in their learning experiences, develop life-long learning skills and inquiry through effective collaboration with peers and instructors (McHugh et al. 2021; Wagner et al. 2008).

2.2 Hilda Taba Model: Grass-Roots Model

Taba's or as called Grass-Roots model is mainly based on shared decisions in curriculum planning, requiring collaboration to identify learners' needs in the study area (Porter et al. 2020). Thus, educators working on curriculum development must first identify issues in the education field, add their expectations of the curriculum, and develop their own teaching and learning units. This shall be raised to curriculum expertise to train teachers and combine all aspects together to go under critical revisions (Krull 2003). The decentralization of designing requires the teachers to be trained effectively and empower them to become stakeholders in constructing syllabuses, which adds valuable input to the curriculum from its implementers (Abudu & Mensah 2016). Hence, Taba's model initiates curriculum development processes by identifying students' needs and ending it with an evaluation of the process. These curriculum processes are students' needs identification, stating objectives, content selection followed by organization, learning experiences selection, activities organization, and finally evaluating objectives accomplishment (Bhuttah et al. 2019). Thus, the benefits of Taba's model are to generate learners' engagement in the learned content and teachers can teach within the range of their interest and ability since they were involved in planning for the taught curriculum (Portillo et al. 2020).

2.3 Bloom's Taxonomy and Complexity Levels in Curriculum Planning

Bloom specified six cognitive complexity levels of learners' mastering the acquired concepts, where each level is considered building upon the previous levels. These six levels are remember, understand, apply, analyse, evaluate and create (Starr et al. 2008). Simultaneously, the cognitive levels' hierarchical order is often associated with the learner-centered approach and correlates with the students' critical thinking application, which requires the revision of students' prior learning and newly learned information (Nkhoma et al. 2017). Consequently, it has been argued that cognitive complexity levels shall be impeded within curriculum objectives and shall ensure students' progression through these steps to master each competence (Kozikoglu 2018). Hence, Bloom's levels can also be implemented as part of the planned course assessment to measure the effectiveness of the learning outcomes, which can foster students' cognitive development through implementing the learned information through practical assessments (Betts 2008). These assessments must be structured within the course and should be applied gradually with effective guidance to the learners, enabling the students' confidence and learning skills growth (Ramirez 2017). Hence, a significant impact of this Taxonomy is on the students' metacognition improvement through conceptualizing the ideas learned, where this should also be reflected within the curriculum development (Wei & Ou 2019).

2.4 Curriculum Implementation in Higher Education

First, people with authority in higher education divisions must consider different teaching curriculum pedagogies to develop the implementation curriculum within their reformation plans. This is to be done through empowering teachers with core skills to assess, develop and comment on the curriculum implementation (Shawer 2010). As teachers are more involved in the curriculum implementation, their expertise in the reform increases, which leads to gathering further data regarding the issues faced when implementing the curriculum. This can also be shaped by the students' input in higher education during the implementation process, which can enhance the curriculum planning later (Onwu & Mogari 2004). As curriculums are developed and ready to be implemented in higher education, the practical assessment applications, especially the student-centered ones, can identify challenges related to resources, activities, and outcomes. Hence, teachers can reconsider all of these aspects for the following curriculum healing cycle (Chan et al. 2017). One of the reported challenges is that some curriculum competencies are developed and applied in the higher education curriculum but not tackled in the assessment, which does not reflect authentic reported data regarding the effectiveness of the syllabus (Chan et al. 2017; Shawer 2010). Another challenge is that there might be a gap between the theory or approach and the planned curriculum, which may lead to

inconsistency during the implementation process. This can be due to the input given by larger groups of teachers during the curriculum decision meetings, who are adding different information from each one's perspectives (Ryan 2021).

3. Methodology

3.1 Research Method, Approach and Rationale

A theoretical analysis of Arabic as a first language acquisition syllabus will be applied in this study, evolving around drawn literature discussed in the literature review section. A horizontal approach is applied to evaluate the syllabus as part of the curriculum reform in the education division in higher education. Thus, it includes a formal analysis of the syllabus; evaluation of context, input, process and products, which is the CIPP model suggested by Stufflebeam 1983 (Mosti 2009; Aziz et al. 2018). The first justification for selecting the horizontal evaluation approach is to unpack the syllabus components, and evaluate each aspect according to the literature review of the stated underpinning theory and approaches of curriculum reform. Additionally, this will also enable the research to pay close attention to outcomes, delivery framework, assessments and resources suitability to higher education learners. A Further rationale and research objective is to measure how effective the syllabus is for higher education teachers and students. I would also link my experience in curriculum planning and provide related recommendations according to the syllabus analysis. Hence, my own experience in the field of course development and reform can add and support the analysis and discussion.

3.2 Site, Instrument and Ethical Consideration

A course syllabus of Arabic as a first language acquisition: principles and pedagogy is developed in the education department in one of the UAE federal institutions will be considered for the study evaluation. This document will be the only used instrument for the evaluation, supported by the theoretical analysis and supported by the literature. Therefore, as part of this study ethical consideration, the name of the institution and any name of syllabus designers will remain hidden as part of maintaining professionalism (Mills 2014). Hence, depending on the theoretical aspects and only analysis of the syllabus reform is considered a limitation of the research, where additional input from opinions and empirical data collection can enhance the research findings.

3.3 Syllabus Overview

This course structure and similar newly added courses are considered part of the education program accreditation within the institution and in the higher education system in general. First, general course information such as; contact hours, credit hours, etc. are

provided at the beginning of the syllabus. Furthermore, the syllabus includes the description, Course Learning Outcome (CLOs) organized according to the level of complexity from the lowest to the highest. In addition, the syllabus contains the week-by-week delivery framework and teaching and learning methodology, which explains what exactly to be covered in each session. Based on all the previous components, the syllabus includes the course assessments, which will measure the achievements of students' learning throughout the course. These assessments vary in terms of covered CLOs and type, which are quizzes, oral presentation and a final report. It provides the teachers, team leaders and curriculum readers an insight into suitable e-textbooks, out-of-class assignments and teaching practice tasks. Teaching practicum is also an essential part of the course and covers four weeks, including specific course-related tasks to be implemented while the students are in schools. Another major syllabus component is the alignment of the CLOs with the Program Learning Outcomes (PLOs). This course is also well prepared to be delivered through the online learning systems along with available and accessible materials for the teachers and students (see appendices).

4. Data Analysis, Findings and Discussion

The aim of the research is to evaluate and analyze the course the Arabic as a first language acquisition: principles and pedagogy syllabus in one of the colleges in the UAE. This section will include an analysis of the syllabus based on the curriculum evaluation based on the CIPP model; context, input, processes and products. This will be linked and supported with evidence from literature and related experience of the researcher in curriculum reformation. The analysis, findings and discussions will be interpreted in this section based on the research stated objectives below to measure whether they were achieved or not.

- Understand the syllabus components through the underpinning theories and approaches' lens
- Measure the curriculum effectiveness for teaching and learning of higher education teachers and students.
- Draw recommendations on curriculum reform based on the theoretical analysis of the document.

4.1. Context

To start the analysis and as per my experience as a course team leader, this course syllabus is related to the other courses taught in the ECE program and is an essential requirement for graduation. Hence, it is associated with the other courses taught and

builds on students' knowledge and understanding of Arabic as a mother language (Porter et al. 2020; Abudu & Mensah 2016). In addition, the analysis of the syllabus and mainly considering the week-by-week framework is that this course is connected tightly to the learners' practicum experience. Consequently, it is essential for the preparation of the students for the internship and future career (McHugh et al. 2021; Wagner et al. 2008). This also indicated the implementation time framework of content within sixteen weeks, which seems to be enough to cover the course content. Besides, I found that the course guides the teachers throughout the semester by providing comprehensible information, even with the related knowledge about applied tasks. As a result, teachers will be aware of what information, theories and skills to be constructed during the course duration (Valdez & Reed 2020; Duffy & Tobias 2009).

Regarding the 'contribution of the course to program outcomes' and the 'mapping of course learning outcomes to program learning outcomes' sections in the reformed syllabus, I noticed that the CLOs were assigned and linked to PLO. This indicates that the course is carefully designed to suit the divisional outcomes and serve the purpose that the course is designed for (Ryan 2021; Abudu & Mensah 2016). All the previous context evaluations shows that the designed syllabus in the appendices matches the education program outcomes and is suitable for the purpose it is designed for.

4.2. Input

Regarding the input evaluation phase, I found that it was evident in the syllabus the learners will gain some life-long learning skills such as searching for information for out of class assessment or applying learned theory, or investigating the applications of pedagogies practicum (see week-by-week delivery framework section). Another finding is that the designed course is planned to cover the theoretical aspects of first language acquisition in general and Arabic language acquisition as a first language in specific. Hence, this entails teaching through standard lectures and multimedia content methodologies to ensure the coverage of primary principals in the first seven weeks (Bhuttah et al. 2019; Kaya et al. 2012). I also noticed that the complexity level of cognitive knowledge increases as the teachers and students progress throughout the weeks and CLOs. This was evident through the used verb, which indicates the type of work and thinking levels (Kozikoglu 2018;). Therefore, the first three learning outcomes as well as the first nine weeks of delivery, cover the basic levels of Bloom's Taxonomy, which deals mainly with understanding and remembering concepts (Starr et al. 2008). In the last weeks, more complex and advanced cognition levels are implemented in the syllabus, particularly during the practicum and afterward. This was notable through starting to turn the content into examining the acquired theories into practical examination and application either through assessments or teaching practice period (Nkhoma et al. 2017). My expertise in the field enables us as teachers to ensure that the

students are well aware of the content and make sure they gained the needed input before starting their assessments. However, I would recommend including the teachers' skills in the syllabus, which can also guide and provide input on current and recent pedagogies lecturers.

Based on my experience as a lecturer in the institution and a team leader, there are different resources applied in order to engage the learners, mainly the ones that fit e-learning and could encourage discussions and knowledge sharing amongst students (Doubleday et al. 2015; Mccombs & Vakili 2005). Similarly, I noted that teachers were selected based on course subject knowledge and expertise to ensure a high quality of teaching and learning (Shawer 2010). Furthermore, the analysis showed that several e-textbooks are provided in the syllabus to encourage students to read for further input about Arabic and first language acquisition. Some resources are also uploaded in the Blackboard shell for both teachers and students as per my experience. It is true that the evaluation revealed that the course involves the skills, knowledge levels, and practical links to theories along with the resources, it would still be effective to include other resources implemented in teaching and learning to guide teachers, accreditors and learners.

4.3. Process

Since this course is part of level one freshmen in the education program, the students are eligible to take the course if they get the English EmSAT score of 1100 or an equal IELTS band of 5.5. Since some courses are developed to be delivered in Arabic such as the syllabus that is evaluated in this study, the students must also have an Arabic EmSAT score of 600 to have enough language skills to be used in assessments and class participation. I assume that meeting these standards to study the course is essential for the learners to deliver the course assessments accurately. A noted mixture of transferred knowledge and application is considered in the syllabus which is divided according to percentages of course delivery (see appendices-Teaching and learning methodologies (TLM) section). This proves that the syllabus reform considered the way of communication happening during the implementation process of teaching and learning (Abudu & Mensah 2016). As a result, this leads to enhance the understanding of course instructors, inform learners that the course won't only depend on lecturing but also on applying knowledge and project-based learning (Rodrigo 2017).

However, teaching and learning might be affected due to the current shift of practicum which used to be face-to-face and now is becoming virtual due to COVID-19. Thus, some students might face issues in applying some pedagogies tasks of teaching Arabic as a first language in ECE classrooms, because some require observing the learning environment and recording data. I would recommend considering alternative tasks that can replace the actual class ones to enable learners to apply learning and for

teachers to assess understanding (Ryan 2021).

4.4. Products

As per the products process in the evaluation of the curriculum, it is noted that there are different types of formative and summative assessments used, so the students can implement what they have learned. For example, in the assessment section in the appendices, you can see a coursework quiz covering CLO1 and oral presentation covering CLO 2 and the final report covering CLOs 3 and 4, which are being the summative assessments for the syllabus. Additionally, the formative assessments are applied during the course and found in the out-of-class assignments. This is really effective in measuring the learning outcomes achievement and indicates students' learning of the delivered contents (Chan et al. 2017; Shower 2010). Another example found in the syllabus, which is considered practical application, is the tasks applied during school practicum days.

Consequently, the students will put the understanding of Arabic as L1 theories into practice, also teachers can measure their practical knowledge through the tasks done and the inquiry process they followed (McHugh et al. 2021; Wagner et al. 2008). Linking to the researcher's experience at the end of each course implementation, students' overall grades of the course assessments, teachers' and students' course satisfaction surveys are considered data to measure the course effectiveness. Thus, all of the following evaluations can draw recommendations regarding syllabus design and reform, focusing on faced challenges during the implementation and gain ideas for enhancements from the instructors and learners (Bhuttah et al. 2019). Every year, each team leader shall consider the feedback given by the team and share that feedback with the education management to be applied to the courses as part of course healing and curriculum polishing (Portillo et al. 2020).

Yet, it is recommended to involve the students in the course healing panels to consider the challenges faced in the course and mainly with assessments. The reason is that students are the ones who view assessments as a threat to them and at the same time they must do their best to gain the highest grades. Another suggestion is to include the informal assessments each week after the delivery of the intended content. This would reinforce the ideas and lead to construct further knowledge and skills as they progress throughout the course (McHugh et al. 2021; Valdez & Reed 2020).

5. Conclusion & Recommendations

To conclude, this research was conducted to evaluate and understand a syllabus developed in the education division in a UAE federal college. The evaluation and

researcher's experience in curriculum reform revealed that the course is effective for teaching and learning in terms of information delivery, assessments, knowledge application, and learning construction. Another finding is that the syllabus reform proved that it matches and applies the concepts and theories discussed in the literature review: the Constructivism theory, learner-centered model, Grass-root model, and implies Bloom's Taxonomy efficiently. A further result of the research is that it achieved the second research objective in terms of curriculum effectiveness and proved its efficiency. This was demonstrated through the CLOs meeting the program learning outcomes, developing learners' learning and life-long learning skills. It also presents the syllabus content ability in implementing the learned theories of Arabic as first language theories into practice, whether during the students' internship or in course assessments. Another evidence of syllabus reform effectiveness is that it represents the way of communication and delivery method to track teaching and learning, also the e-textbooks are provided to support reading and research skills as course resources.

Additionally, the syllabus involves formative and summative assessments which are measuring specific CLOs. The course is evaluated each semester and is improved yearly as per the experience of the researcher. On the other hand, some recommendations were provided which achieved the third research objective. The first recommendation is to include the instructors teaching skills to the syllabus. Second, mentioning all other teaching and learning resources in the weekly plan and providing alternative tasks to fit the virtual practicum. Another recommendation is to include an informal formative assessment description in the weekly plan. Another essential suggestion for course reform is to involve the students' input in the curriculum healing meetings, which can enhance the process.

The research is concluded with two main recommendations for additional future study. The first suggestion is to use empirical data using the qualitative method to collect related data as evidence to support the curriculum effectiveness. Thus, conducting interviews with curriculum planning teams, students and stakeholders can provide further input to the CIPP evaluation. Another recommendation is to consider the impact of the assessment implementation process, results and satisfaction report on course development, the aspects of development, and what kind of curriculum change is implemented throughout the year. This would help identify the changes and draw conclusions on the amount of implemented planning efforts and evaluation aspects taken into consideration.

References

1. Abudu, A. & Mensah, M.: Basic school teachers' perceptions about curriculum design in Ghana. *Journal of Education and Practice*, 7 (9), pp. 21-29 (2016).
2. Amineh, R. & Asl, H.: Review of constructivism and social constructivism. *Journal of Social Sciences, Literature and Languages*, 1 (1), pp. 9-16 (2015).
3. Aziz, S., Mahmood, M. & Rehman, Z.: Implementation of CIPP model for quality evaluation at school level: a case study. *Journal of Education and Educational Development*, 5 (1), pp. 189-206 (2018)..
4. Betts, S.: Teaching and assessing basic concepts to advanced applications: using Bloom's Taxonomy to inform graduate course design. *Academy of Educational Leadership Journal*, 12 (3), pp. 99-106 (2008).
5. Brandon, A. & All, A.: Constructivism theory analysis and application to curricula. *Nursing Education Perspectives*, 31 (2), pp. 89-92 (2010).
6. Bhuttah, T., Xiaoduan, C., Ullah, H. & Javed, S.: Analysis of curriculum development stages from the perspectives of Tyler, Taba and Wheeler. *European Journal of Social Sciences*, 58 (1), pp. 14-22 (2019).
7. Chan, C., Fong, E., Luk, L. & Ho, R.: A review of literature on challenges in the development and implementation of generic competencies in higher education curriculum. *International Journal of Educational Development*, 57, pp. 1-10 (2017).
8. Dehghani, M., Pakmehr, H. & Sani, H.: Managerial challenges of curriculum implementation in higher education. *Procedia Social and Behavioral Sciences*, 15, pp. 2003-2006 (2011).
9. Doubleday, A., Brown, B., Patston, P., Jurgens-Toepke, P., Strotman, M., Koerber, A., Haley, C., Briggs, C. & Knight, G.: Social constructivism and case-writing for an integrated curriculum. *The Interdisciplinary Journal of Problem-Based Learning*, 9 (1), pp. 44-57 (2015).
10. Duffy, T. M. & Tobias, S.: *Constructivist instruction success or failure?*. New York: Routledge (2009).
11. Hång, N., Meijer, M., Bulte, A. & Pilot, A.: Designing a primary science curriculum in a globalizing world: how do social constructivism and Vietnamese culture meet?. *Cultural Studies of Science Education*, 12 (3), pp. 739-760 (2017).
12. Kaya, E., Cetin, P. & Yildirim, A.: Transformation of centralized curriculum into classroom practice: an analysis of teachers' experiences. *International Journal of Instructional Media*, 2 (3), pp. 103-114 (2012).
13. Kozikiglu, I.: The examination of alignment between national assessment and English curriculum objectives using revised Bloom's Taxonomy. *Educational Research Quarterly*, 41 (4), pp. 50-77 (2018).
14. Krull, E. (2003). Hilda Taba. *Prospects*, 33 (4), pp.481-491.
15. McCombs, B. & Vakili, D.: A learner-centered framework for e-learning. *Teachers. College Record*, 107 (8), pp. 1582-1600 (2005).

16. McHugh, D., Yanik, A. & Mancini, M. An innovative pharmacology curriculum for medical students: promoting higher order cognition, learner-centered coaching, and constructive feedback through a social pedagogy framework. *BMC Medical Education*, 21 (1), pp. 1-18 (2021).
17. Mills, J.: *Action research: a guide for the teacher researcher*. Essex: Pearson (2014).
18. Mosti, G.: Two key questions for horizontal policy making & implementation. *Institute on Governance*, 34, pp.1-5 (2009)..
19. Nkhoma, M., Lam, T., Sriratanaviriyakul, N., Richardson, J., Kam, B. & Lau, K.: Unpacking the revised Bloom's taxonomy: developing case-based learning activities. *Education and Training*, 59 (3), pp. 250-264 (2017).
20. Porter, A., Portillo, E., Gallimore, C., Zorek, J. & Barnett, S.: Let external stakeholders be your guide to curricular revision. *American Journal of Pharmaceutical Education*, 84 (8), pp. 1057-1060 . (2020).
21. Portillo, E., Look, K., Mott, D., Breslow, R., Kieser, M. & Gallimore, C.: Intentional application of the Taba curriculum model to develop a rural pharmacy practice course. *Innovations in Pharmacy*, 11 (1), pp. 1-7 (2020).
22. Onwu, M. & Mogari, D.: Professional development for outcomes-based education curriculum implementation: the case of UNIVEMALASHI. South Africa. *Journal of Education for Teaching : JET*, 30 (2), pp. 161–177 (2004)..
23. Ramirez, T.: On pedagogy of personality assessment: application of Bloom's Taxonomy of educational objectives. *Journal of Personality Assessment*, 99 (2), pp. 146-152 (2017).
24. Ryan, D., Faulkner, F., Dillane, D. & Flood, R.: Communities of practice as a solution for the implementation gap in internationalisation of the curriculum. *Higher Education Research and Development*, pp. 1-16 (2021).
25. Rodrigo, R.: Reflections and insights on the models of learning: subject- centered, learner-centered and problem-centered design models. *ResearchGate*, pp. 0-5 (2017).
26. Shaver, S. F.: Classroom-level curriculum development: EFL teachers as curriculum-developers, curriculum-makers and curriculum-transmitters. *Teaching and Teacher Education*, 26 (2), pp. 173–184 (2010).
27. Slavin, R.: *Education psychology theory and practice*. Harlow: Pearson Education Limited (2014).
28. Starr, C., Manaris, B. and Stalvey, R.: Bloom's taxonomy revisited: specifying assessable learning objectives in computer science. *ACM SIGCSE Bulletin*, 40 (1), pp. 261-265 (2008).
29. Valdez, A. & Reed, K.: A student approach to constructivist curriculum design. *Curriculum and Teaching Dialogue*, 22 (1), pp. 107-120 (2020).
30. Wei, B. & Ou, Y.: A comparative analysis of junior high school science curriculum standards in Mainland China, Taiwan, Hong Kong, and Macao: based on revised Bloom's taxonomy. *International Journal of Science and Mathematics*

- Education, 17, pp. 1459-1474 (2019).
31. Wagner, T., Longenecker, H. & Saulnier, B.: A methodology to assist faculty in developing successful approaches for achieving learner centered information systems curriculum outcomes: team based methods. *Journal of Information Systems Education*, 19 (2), pp. 181-195 (2008).
 32. Wolpaw, T., Wolpaw, D. & Papp, K.: SNAPPS: a learner-centered model for outpatient education. *Academic Medicine*, 78 (9), pp. 893-898 (2003).
 33. Zain, S., Rasidi, F. & Abidin, I.: Student-centred learning in mathematics constructivism in the classroom. *Journal of International Education Research*, 8 (4), pp. 319-327 (2012).

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

