

The Assessment as Learning (AaL) Framework for Teaching and Learning – The AaL Wheel

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Introduction

Currently, there is an increasing need in society for individuals with the ability to deal with dynamic challenges, to be able to constantly learn and to produce effective and innovative solutions through critical thinking, which is one important aspect of Learning How To Learn (LHTL) (Crick, 2007). The LHTL theory maintains that, essentially, there is an overriding need for the individual to develop not only knowledge-based understandings of materials in the classroom, but more importantly, metacognitive skills which help them manage their learning. Learners need skills which they can apply to other challenges in life, for example, the ability to observe, analyze and learn, what Black et al. (2006) refers to as ‘lifelong learning’ and what Garrett (2011) argues as elements in widening students’ capability in learning. LHTL depicts a learning process during which students learn how to tackle learning course materials in addition, all the while developing metacognitive skills and knowledge applicable to other challenges beyond the classroom, from the workplace to everyday life (James et al., 2007). The last half a century saw a number of education reforms that took LHTL as a main overarching educational goal on the reform agenda. The agenda highlights the significance of helping students take charge of their learning. The assessment policies stipulated in these reforms suggest the use of self- and peer-assessment to increase learners’ metacognitive abilities (Berry, 2011b). The assessment practices in many classrooms, however, are still very much less effective than others in promoting the kinds of learning outcomes that are needed by students today and in the future (James, 2006).

The pedagogies used by the teacher could impact significantly on the quality of student learning (Bronkhorst et al., 2011). Education constantly looks for innovations that bring about improvement in teaching with the express purpose of improving student learning. What is quite noticeable in all this transformation is that those in the midst of it need catalysts such as frameworks, models, advice, and other guidance. Frameworks are very useful to effect improvement as they provide a useful way to examine possibilities (Bonk & Dennen 2007; Eun, 2011). They help focus attention on the characteristics of teaching and learning that are salient to each individual theory. They provide systematic, well delineated ways of describing and explaining the teaching/learning process, often with the support of a distinct vocabulary representative of underlying epistemological and ontological perspectives (Young, 2008). Marsh (2009) stresses that a well-developed framework should provide strong links between theory and practice and that it should be inspiring to teachers. Developing a framework demands strategic alertness (Entwistle and Walker, 2000). Strategic alertness requires a shift of attention to previously unattended-to factors through the use of a selected frame of reference. The framework designed will thus help refocus attention and provide a fresh way of conceptualizing teaching and learning. The Assessment as Learning (AaL) Framework proposed intends to look at teaching and learning from a new perspective – the perspective of assessment in respect to students taking an active role of their learning.

Teachers' and Students' Roles in Assessment as Learning

There are three widely recognized assessment approaches in current literature, namely, Assessment of Learning (AoL), Assessment for Learning (AfL) and Assessment as Learning (AaL) which reflect three different focuses of learning conceptions. AoL represents the assessment conception of measurement. Judgments of performances are taken at the end of learning. Assessment practices in many educational contexts are often inclined to link teaching and learning with this kind of assessment. Both AfL and AaL take the learning process as being significant and emphasise the roles of assessment in

supporting learning. What makes AaL different from AfL is that AaL places special attention on the role of the learner and promotes active engagement of learners while AfL places stronger emphasis on the role the teacher plays in promoting learning. AaL could be said to be an “assessment as learning to learn paradigm” while AfL an “assessment in support of learning paradigm” (Berry, 2008a).

Earl (2003) says that AfL can go a long way in enhancing student learning. By introducing the notion of AaL, the intention is to extend the role of AfL by emphasising the role of the student, not only as a contributor to the assessment and learning process, but also as the critical connector between them. The student is thus the link between teaching and learning. Being an active, engaged and critical assessor, the student makes sense of information, relates it to prior knowledge, and deliberates the strategies and skills involved in taking their learning forward. S/he self-analyses, self-references, self-evaluates and self-corrects in the learning process. These and other metacognitive strategies help him/her raise their awareness of what s/he is doing so that s/he can plan what s/he needs to do to move learning forward (Berry & Adamson, 2011). Students’ roles may also include working out what their teachers expect of them and doing it well. Brookhart (2001) calls this knowing the art of ‘studenting’.

For the teachers, this entails a major change of their roles, from a presenter of content to a practitioner of more productive pedagogy, involving shared responsibility for learning by student and teacher (Klenowski, 2007). Vygotsky’s conception of the Zone of Proximal Development (1978) suggests that the aim of teaching is to encourage the learner to be ever more independent from the teacher. AaL may involve the teacher aligning to a set of procedures that allow the learner to move forward independently in the required learning. During the learning process, students are helped to use assessment information to set goals, make learning decisions related to their own improvement, develop an understanding of what quality work looks like. They self-assess, seek feedback from their peers and teachers, and reflect on how these take them to the next step of learning (Chappuis and Stiggins, 2002). Although AaL concepts have been in discussion for quite some time, there is little information on how

the concepts can be transferred into actions. The AaL Framework for teaching and learning, or the AaL Wheel, is subsequently proposed with an aim of bridging the gap between theory and practice.

The Basic Structure of the Assessment as Learning Framework

Weaver and Farrell (1997, p.45) identify four essential elements in developing paradigms, models or framework – assumptions/beliefs, values, vocabulary, and behaviors/activities.

- Assumptions/Beliefs: one's perceptions about what is real or true; the foundation for the behaviors and activities that are chosen by him or her.
- Values: one's views of what are important to him or her; these become the basis for setting priorities and making choices of what goals to pursue and how problems are to be solved.
- Vocabulary: the words that are used to communicate, for example, about how problems are posed and solutions described.
- Behaviors/Activities: are those worked out approaches and solutions that display the world view as a coherent whole.

The framework proposed in this article is built upon the above mentioned concepts, using the terminology of Contextual, Societal, Communication, and Action Domains. The term *Contextual Domain* is chosen based on the understanding that no matter how widely recognized some education conceptions may be, political, economic and cultural contexts should play a part in policy development and implementation in individual educational settings. In the AaL Framework, the contextual domain represents the assumptions and beliefs of the government, often expressed explicitly in official documents and hence become the policies to direct and govern the activities to be designed by the personnel working in different education sectors in the society. The term *Societal Domain* is selected to acknowledge the influence that society may exert on educational policies. This domain describes the values, including shared perceptions and expectations, across one or more groups in the society. The domain covers the beliefs and philosophies of these groups. Whether in-line

with the vision stipulated in the government policies or not, these perceptions would consequently govern the stakeholders' decisions and the actions to take in delivering the government directives. The term *Communication Domain* is used for its self-explanatory function – expressions and negotiations of social meaning. This domain contains the vocabulary or the words that are used to communicate, for example, about how problems are posed and solutions described. It is the language, including common terminology and understandings through which the beliefs are conferred and understood. *Action Domain* is picked as the term implies change and progression (Angyal's System Dimensional Model (Angyal, 1941)). Linking theory to practice is often regarded as a challenge (Berry, 2008b; Munns, 2005; Rose, 2002). Actions are the catalysts to link conceptions into classroom practice. The Action Domain of the AaL Framework describes the behaviors or activities happening at the implementation frontline. The activities can consist of simple, singular tasks that are carried out on a daily or regular basis.

The Contextual Domain is core to the framework. The stored information in the context is retrieved by the other three domains for deliberation, interaction, and delivery of actions. The context domain, in turn, draws observations from the societal, communication and action domains in order to update the information stored within itself, acting as a dynamic archive. For example, if the framework was the clothing industry, before a skirt is designed and manufactured (*Action Domain*), the factory draws upon existing knowledge of information from the *Contextual Domain*, which can be the policies and regulations set by the government and respective organizations. To determine what designs and manufacturing processes would be more successful and what costs would result, the factory will need to refer to the *Societal Domain* to check what views the society has on skirts. The views may include public opinion on the appropriateness of, fashion trends about, and gender implications towards skirts. At the same time, the factory will need to be sure that the terminology used, such as the term 'skirt' and other messages, including problems and solutions, in relation to the design and production are established and can be communicated with relevant parties (the *Communication Domain*). *The Action*

Domain represents the actions, for example, sewing a hem on a skirt in a garment factory. Methodologies in this domain are a combination of many ‘do’s, for example, how to run a factory or, even the garment industry as a whole, such that there is a tangible product. After production of the skirt, the information stored in the *Contextual Domain* would be updated with the observations that were made across the board – how successful the production process was (*Action Domain*), whether the manufacturing process caused any public disturbances or damage (*Societal Domain*), if the language of the industry had changed over time (*Communication Domain*), etc., allowing for the development of all four domains. Figure 1 below presents the basic structure of the four domains in the AaL Framework.

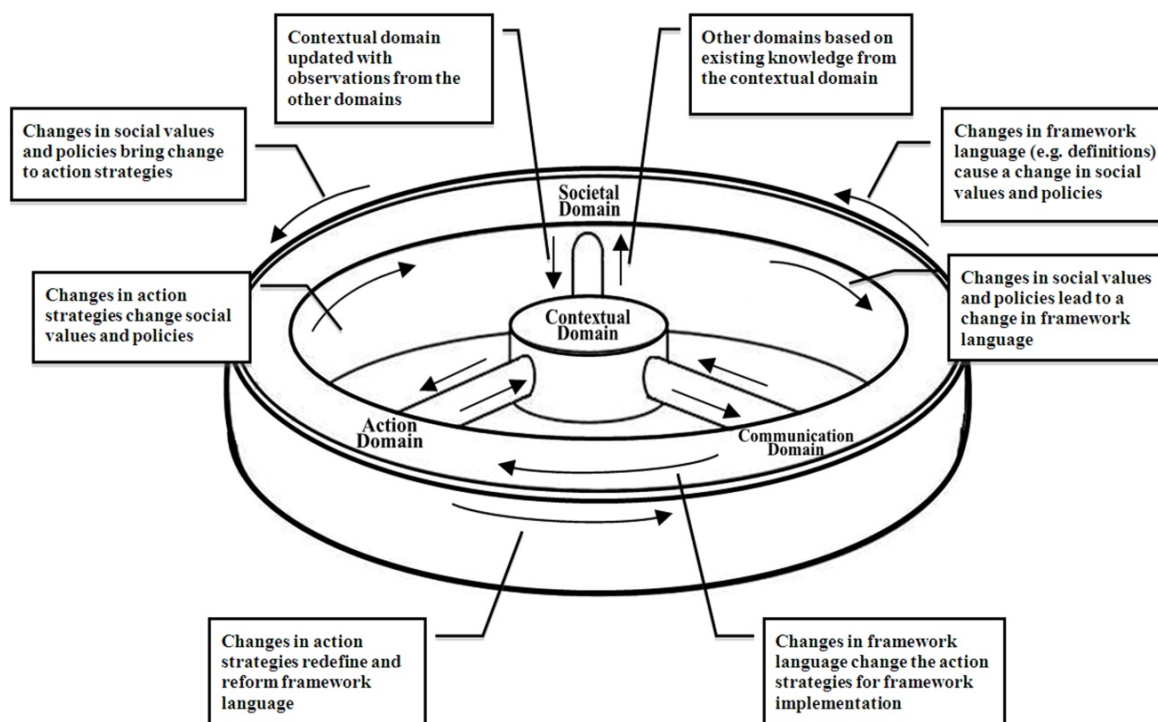


Figure 1. The basic structure of the Assessment as Learning (AaL) Framework

The Assessment as Learning Framework for Teaching and Learning

Though the structure of a framework can be varied, in constructing a new framework, it is deemed important to know the reality of the situation and the parameters of the expectations. According to Stansfield (2001), the approach towards constructing a new framework should begin with the definition of the desire (expectations) – what one believes to be the truth. This is followed by observing what the reality is in this particular domain, and a comparison between the two.

The Contextual Domain

In the *contextual domain* of the AaL Framework, a desirable situation is that government policies embed the development of “Learning how to learn” in students, with a vision on making assessment an agent for activating student learning. There will be emphasis on taking assessment as a process of metacognition for students. Assessment policies will revolve around learning process, taking student-centeredness as core. Official documents may contain a section with detailed guidelines on how teachers’ roles can be de-centered to students in the purpose of making students take more responsibility for their own learning. Drawing on the government assessment policies, the assessment policies for different education sectors can focus on developing students’ ability to learn, for example, enhancing their critical thinking, analyzing and general skills. More directions can be given to create opportunities for students, either in groups, pairs or individually, to reflect and analyze their own performance and subsequently work on the next steps for learning. Assessment is seen as a partnership between students and teachers, where the former is not only active but also responsible for their own learning and assessment while the latter acts as a facilitator, providing opportunities for learning and self development and guidance when necessary. Teachers are to be supported to use assessment to promote LHTL. The government may provide funding for teacher training and offer additional resources to reduce teacher-student ratio to enable more classroom interactions between the teacher and the students. Through an agora

between the government and the personnel from different educational sectors and contexts, the development of LHTL in connection with assessment may be established.

In many education *contexts*, assessment policies at government level are more focused on giving detailed descriptions of rules and regulations of examinations, mechanisms for marking and moderation of scores, avoiding plagiarism and cheating, etc. There is typically little or no discussion on how assessment can contribute to learning, in particularly how it may help students to become active learners (Boud, 2007). Many countries, particularly in recent years, embarked on educational reforms with LHTL highlighted as the way forward for the overarching educational aim. In their official documents, these countries provide the overarching policy to link assessment with learning but generally miss concrete ideas on how to make assessment a useful tool to promote active learning in parts or all of their policies and guidelines. At schools, similarly, assessment policies are usually presented as a form of official document which may not contain a section with detailed guidance on how, and on what bases, judgments about the quality of student performance should be raised through increasing learners' self awareness of their learning. Assessment policies revolve around processes like examinations, grading, as well as quality assurance, with less emphasis on linking assessment with learning (Saddler, 2005; Berry, 2011b).

The Societal Domain

Regarding the *Societal Domain*, one would like to see that society perceives assessment as a tool to help develop potentials and abilities in dealing with challenges in life. Employers would be more aware of the fact that grades and numbers shown on the qualification documents can only depict some of the qualities of their staff. Parents would come to understand that assessment is not simply a tool for measuring their children's performance and abilities or checking the return on their financial and emotional investments, but also a tool to help their children develop metacognitive skills for their future. They will recognize that assessment is both a responsibility of the teacher and the student,

with an emphasis on the latter, and hence help with the psychological and mental preparation of their children towards dealing with self-assessment while the child is under their care. Teachers, similarly, are to see assessment as not only their responsibility, but also that of the students. As such, assessment requires teachers not only to allow, but to encourage and facilitate student participation in monitoring and critiquing their own work and progress, and by association, their own learning. They would see their role in assessment as facilitators, helping students, for example, understand the criteria to assess themselves, self reflect their performance and make educated decisions on what to do next in enhancing their learning. Students will realize that assessment procedures are opportunities for them to develop LHTL. They would learn that assessment is a tool to help them monitor learning and understand what learning stage they are at. With the updated information, they will direct efforts towards improving their work. They will acknowledge the importance of the internal processes of assessment in their own learning process and uses external assessment as a necessary but relatively auxiliary form of support.

In recent years, there has been an increased advocacy across education sectors on having students become more active players in assessment as part of the process of learning (Berry, 2006; Craddock & Mathias, 2009). Accordingly, assessment can be used as a tool to help develop individuals into people who are more able to deal with different challenges. Although this view of assessment is gradually gaining more recognition, the larger public still places the values of assessment strongly in certifications, qualifications and accountability (Berry, 2011a; Knight, 2003; Murphy, 2006). Employers often make decisions based on the grade and marks achievements of the candidates. Many parents see assessment as a measurement of the return on their financial investment in their offspring (Race, 1999). Teachers are under pressure to feed their students with a certain amount of academic and community needs information and the simplest way to do it is to adopt the old and traditional approaches to teaching. Assessment methods are not tailored to student needs and students are rarely, if ever, given an active role in their own assessment (Carless, 2006; Gibbs & Simpson, 2004). Teachers come to see teaching and students' learning as

something done to them rather than something teachers and students can be in control of (Watkins et al., 2007). Students are very used to taking assessment as the teacher's responsibility. This is particularly likely to happen if their teachers also believe that this is all they are capable of doing (Kember, 2004).

The Communication Domain

The *Communication Domain* of the AaL Framework would like to see in the society an increased consensus of the function of activating learning in assessment. Assessment is communicated across different parties as a tool which students and teachers can use to enhance learning and develop students' metacognitive abilities. Both teachers and students can be involved in the assessment and learning process. Teachers are the supporter in students' learning process, guiding and helping them to develop the right mentality to learn. Through various kinds of dialogues between teachers and students, students are helped to understand quality of work. Students are given opportunity to establish the ability to check their progress against standards, and make plans to improve when the standards have not been met (Assessment Reform Group, 2006; Expert Group on Assessment, 2009).

The society, however, may not see assessment in the same way. Nicol & Macfarlane-Dick (2006) point out that students, more often than not, take on a passive role in the assessment process. Klenowski (2009) says that there are often variations in interpretation and terminology of assessment. For example, assessment might be treated as an equivalent of tests and examinations. Assessment may be interpreted as merely a tool to generate grades/marks at the end of the learning process. Teachers could be understood as judges to the final product of learning. Formative Assessment (FA), usually used interchangeably with Assessment for Learning (AfL), may be misinterpreted as testing students continuously with a keen focus on checking learning outcomes at the end of numerous teaching intervals. AfL advocates would prefer FA or AfL interpreted as assessing students continuously to understand how students learn so that timely support can be given to them. The interpretation of grades and marks is another example. Grades and marks are often treated as a direct conversion of

feedback. Grades or marks are better understood as one form of feedback, which when used alone, are judgmental of performances and do not give directions for improvement.

The Action Domain

In the *Action Domain*, when applied to day-to-day teaching, teachers can use multi-faceted and various types of assessment to provide students with different kinds of learning experiences. Teachers select, develop, or adapt assessment methods for use based on students' learning needs and different learning styles. They provide self-assessment opportunities for students and help them develop good quality self-assessment. Teachers can try using smaller tasks to make timely feedback possible. Feedback, informal or formal, should be constructive which aims at, in addition to acknowledging students achievements, helping students understand what has been achieved and how to advance from there. Through dialogues or written forms of communication, teachers help students identify the types of strategies which are useful for their learning. For students, the actions will entail a greater involvement in their own learning. There will be opportunities for students to practice assessing skills. They will be supported to understand different standards, for example, the standards required by the teacher and what 'higher standards' entail. Students set their learning goals for assignments and choose strategies to complete the assignments. They record the progress and make notes of the issues that worth attention. They may then work out how they could improve their work.

Shipman, Aloi and Jones (2003) point out that, in many classrooms, students are given a minimal or non-existent role in assessment. Formative assessment and feedback are still largely controlled by and seen as the responsibility of teachers and feedback is still generally conceptualized as a transmission process (Nicol & Macfarlane-Dick, 2006; Hargreaves, 2011). Syllabuses are often provided to students with minimal or insufficient explanation of assessment criteria. There is very little communication of assignment requirements between the teacher and students. Feedback is frequently given in the form of grades with very little communication to students what the grades imply and how students can move on to the next level of learning. The common phenomenon in this kind of classroom is that students

are not able and/or not willing to take control of their learning. This could have resulted from being treated incessantly as passive participants throughout their major time of education, when assessment used is largely traditional, number-based, with specific purposes such as grading, selection, certifications, and qualifications. This kind of assessment usually associates with standardized summative assessments frequently in the form of MC, short answers, etc (Berry, 2010). The learning mode adopted by students usually reflects their mentality of learning. Provided with a passive learning environment, students tend to rote learn. They may perceive that this is what their teachers and their course expect them to do, or that it is what the assessment requires. Students are unaware of what active learning is and how assessment can be of help in making learning active. To meet academic requirements, they normally streamline their study methods and study for the tests, often causing surface learning (Gibbs, 1999). The following table (Table 1) summarizes the ways on how the current situations could be made better.

Table 1. Assessment as Learning (AaL) Framework for Teaching and Learning – The Targets

AaL Domains	The Targets
Contextual:	<p><u>Policies by the government:</u></p> <ul style="list-style-type: none"> - Embed the policy in the development of “Learning how to learn” in students, with a vision on making assessment an agent for activating student learning; - Share the vision with the personnel in different education sectors; - Provide resources and concrete ideas for teacher training and allocate greater funding to reduce teacher-student ratio so as to facilitate AaL development. <p><u>Policies at the educational frontline:</u></p> <ul style="list-style-type: none"> - Take developing students’ abilities to learn how to learn as one main focus of assessment; - Specify in the policies that assessment is also a process of metacognition development in students; - Encourage partnership between students and teachers, where the former is not only active but also responsible for their own learning and assessment while the latter acts as a facilitator, providing opportunities for learning and self development and guidance when necessary.

<p>Societal:</p>	<p><u>Views of the society:</u></p> <ul style="list-style-type: none"> - Sees assessment as a tool to help develop potentials and abilities to deal with challenges in life. <p><u>Views of the teacher:</u></p> <ul style="list-style-type: none"> - Sees assessment as an agent for enhancing student learning, in addition to its other functions such as certification; - Sees assessment a shared responsibility between the teacher and the student; - Sees assessment a dialogue between the student and the teacher regarding student learning; - Sees the teacher’s role in assessment as facilitator, helping the student learn, for example, what standards to meet, how to self-assess, and what kinds of strategies to take to move learning forwards. <p><u>Views of the student:</u></p> <ul style="list-style-type: none"> - Sees assessment as an opportunity to take responsibility and action in learning; - Sees the teacher a supporter of their learning but understand the support will decrease over time; - See assessment as a tool to help monitor learning and understand what learning stage s/he is at. With the updated information, the student will direct efforts towards improving his/her work. <p><u>Views of the parent:</u></p> <ul style="list-style-type: none"> - Sees assessment, in addition to its many other functions, as a tool to help their children develop metacognitive skills for their future; - Sees assessment as both a responsibility of the teacher and the student, with an emphasis on the latter. <p><u>Views of the employer:</u></p> <ul style="list-style-type: none"> - Understands that the assessment results shown on qualification documents can only tell part of the abilities of his/her staff.
<p><i>Communi- cation:</i></p>	<p>Learning as: a process that allows students to take control of their learning. Students can set their own learning goals, check their progress against standards, and make plans to improve when the standards have not been met.</p> <p>Assessment as: a tool through which students and teachers can use to enhance learning and develop students’ metacognitive abilities. Both teachers and students can be involved in the assessment and learning process.</p> <p>Teachers as: facilitators in the learning and assessment process, guiding and helping students to develop the right mentality and skills to learn and assess.</p> <p>Students as: active participants in the process of assessment and stewards of their own learning. They are able to set their own learning goals and select the strategies which are helpful for their learning. They know how to self and peer assess and understand the purpose of self- and peer-assessment.</p>

<p>Action:</p>	<p><u>For teachers:</u></p> <p><i>Learning opportunities, for example:</i></p> <ul style="list-style-type: none"> - Use multi-faceted and various types of assessment to provide students with different kinds of learning experiences; - Select, develop, or adapt assessment methods based on students' learning needs, for example, different learning styles; - Provide self-assessment opportunities for students and help them develop good quality self-assessment. <p><i>Feedback and support, for example:</i></p> <ul style="list-style-type: none"> - Try using smaller tasks to make timely feedback possible. Feedback can be informal or formal; - Give constructive feedback that helps students understand what and how to advance; - Through dialogue, help facilitate students planning of strategies to improve learning; - Acknowledge students' achievements.
	<p><u>For students:</u></p> <p><i>Self involvement, for example:</i></p> <ul style="list-style-type: none"> - Understand different standards including the standards required by the teacher; find out what 'higher standards' entail; - Establish own goals for assignments; - Choose strategies deemed appropriate to tackle the assignment; - Record entire progress, making note of any issues arising and have been resolved; - Write self reflections; - Write peer reviews; - Prepare questions based on self, peer and tutor evaluations prior to communication; - Communicate with the teacher directly or through self reflections after the completion of the exercise; - Modify learning strategies appropriately. <p><i>Student development, for example:</i></p> <ul style="list-style-type: none"> - Seize opportunities to practise assessment skills; - Learn how to set appropriate learning goals and reflect or report on own progress against the goals; - Involve in group work and practise peer assessment.

How Students Can Be Helped to Become Active in Learning

The four domains of the AaL Framework for teaching and learning are engaged in a dynamic relationship, with constantly evolving definitions, understanding of social perceptions and plans of actions in various contexts, aiming at helping learners take an active role in their learning. The *Context Domain*, represents the policies that convey the beliefs and assumptions of AaL

in documents, provides the three other domains with AaL information through policies, directives and guidelines but is constantly updated with observations from three other domains to make AaL understandable in the society and implementable at the education frontline. The *Communication Domain* establishes the definition of AaL terminologies within the framework, such as that of assessment and active learning, setting the language through which the framework will be communicated. Overarching social attitudes, including the perceptions and attitudes of educators, administrators, teachers and students, parents and employers, are contained within the *Societal Domain*. The change in framework language (e.g. definitions) may cause a change in social values in assessment. Learning concepts which highlight student-centredness relates assessment as the activities used by students for gathering information, analyzing and interpreting it, drawing inferences, making wise decisions, and taking appropriate actions in the service of one's learning. Through different channels, this interpretation of assessment is communicated, which may gradually make an impact on how the society sees assessment. A change in the perception of assessment can change assessment practices, reflected in the *Action Domain*. The *Action Domain* represents the responsibilities, roles and characteristics of the student and the teacher. These include the strategies and implementation of AaL practised by the teacher. Students are helped to become active participants in the process of assessment and stewards of their own learning, setting their own goals and developing the skills necessary to achieve them through self- and peer- assessment as well as teacher assessment. Students are allowed to take control of their learning and are helped to set realistic and useful learning goals. When using the new action strategies in the classroom, teachers have a direct understanding of the kind of impact of their actions on students, which may in turn make a change in their perceptions of assessment or even redefine the assessment language in itself for communication with their counterparts. The context domain, as mentioned previously will draw the information from the three domains and update the policies, directives and guidelines which suit the needs of the education community. The figure (Figure 2) below, which builds on the basic structure of the AaL Framework (Figure 1), presents the key features of how students can be helped to become active in learning.

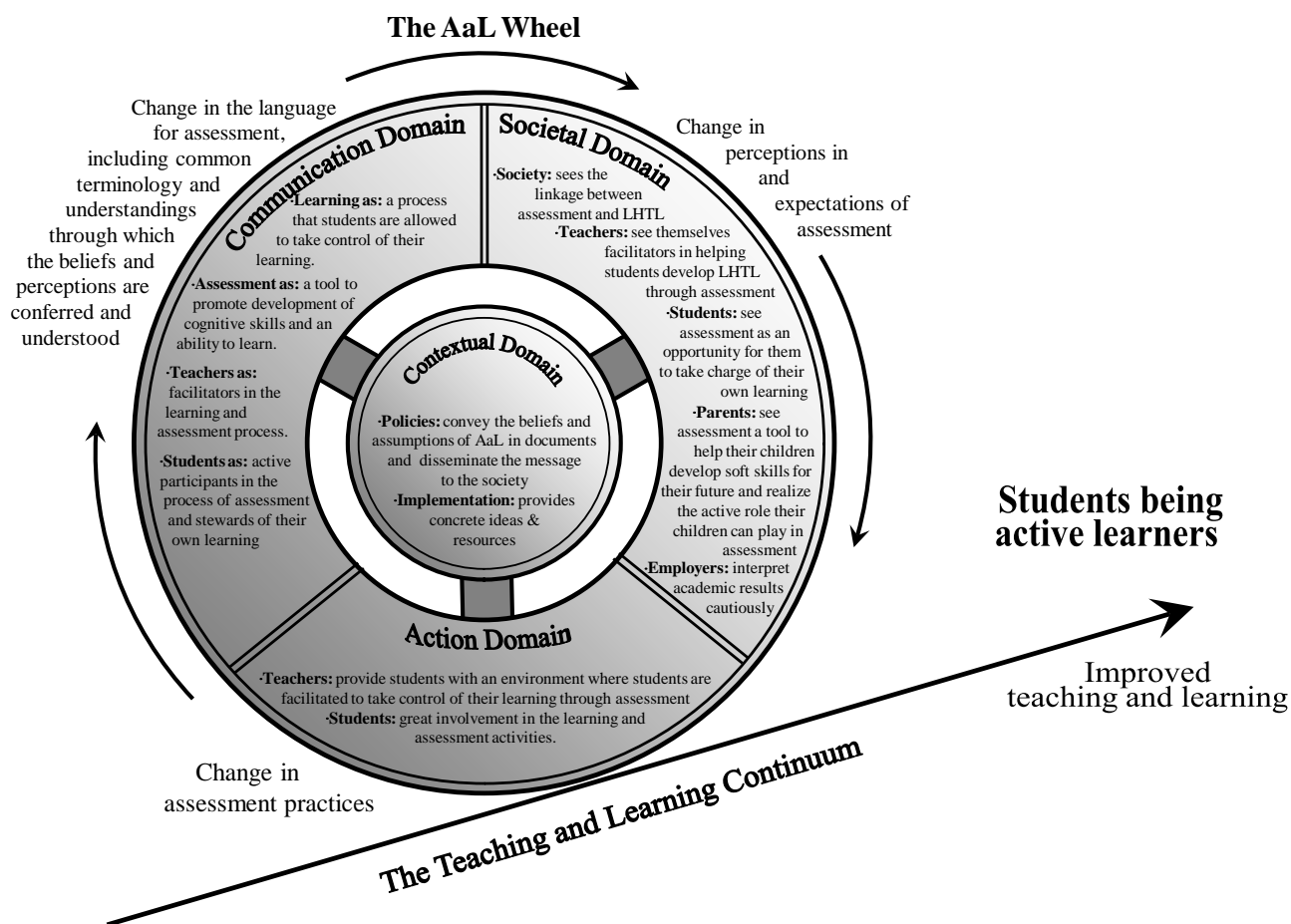


Figure 2. The Assessment as Learning Framework - The AaL Wheel for teaching and learning

Conclusion

Despite the frequent changes and development of school-level curricula and teaching methodologies with an increasing focus on the need for greater student participation in the assessment process and a formative approach to learning, developments with regard to assessment and instruction leaves something to be desired. Many current assessment and instruction practices encourage students to demonstrate current knowledge and to play a passive role in the assessment process, rather than developing critical thinking abilities and being active in their own learning. The Assessment as Learning Framework places strong emphasis on the role of the learner and highlights the use of assessment to increase learners' ability to take control of their own learning. This framework is built upon the combination and integration of the four

domains: Contextual, Societal, Communication and Action Domains. In the Assessment as Learning Framework, the four domains are engaged in a dynamic relationship, with constantly evolving definitions, plans of actions and understanding of social perceptions in various contexts, aiming at helping learners take an active role in their learning so that students can be more able to tackle their challenges in and beyond the classroom.

References

- Angyal, A. (1941). *Foundations for a Science of Personality*. Cambridge, MA: Harvard University Press.
- Assessment Reform Group (2006). *The Role of Teachers in the Assessment of Learning*. London: University Institute of Education.
- Berry, R. (2011a). Assessment Trends in Hong Kong: seeking to establish formative assessment in an examination culture. *Assessment in Education: Principles, Policy & Practice*, 18(2), 199-211.
- Berry, R. (2011b). Assessment reforms around the world. In R. Berry, & B. Adamson (Eds.), *Assessment Reform in Education: Policy and Practice* (pp.89-102). Dordrecht, Netherlands: Springer.
- Berry, R. (2010). Teachers' orientations towards selecting assessment strategies. *New Horizons in Education*, 58(1), 96-107.
- Berry, R. (2008a). *Assessment for Learning*. Hong Kong: Hong Kong University Press.
- Berry, R. (2008b). From theory to practice: Curriculum for autonomous learning. In M. F. Hui, & D. Grossman (Eds.), *Improving Teacher Education through Action Research* (pp.117-136). New York, USA: Routledge
- Berry, R. (2006). Activating learners using the learner autonomy approach: An action research on the relevance of teaching to classroom practice. *Curriculum Perspectives*, 26(3), 34-43.
- Berry, R. & Adamson, B. (2011). Assessment reform past, present and future. In R. Berry, & B. Adamson (Eds.), *Assessment Reform in Education: Policy and Practice* (pp.3-14). Dordrecht, Netherlands: Springer
- Black, P., McCormick, James, M. & Pedder, D. (2006). Learning how to learn and assessment for learning: A theoretical inquiry. *Research Papers in Education*, 21(2), 119-132.

- Bonk, C. J., & Dennen, V. (2007). Frameworks for design and instruction. In M. G. Moore (Ed.), *Handbook of Distance Education* (2nd Ed.) (pp. 233-246). Mahwah, NJ: Erlbaum.
- Boud, D. (2007). Reframing Assessment. In D. Boud & N. Falchikov, *Rethinking Assessment in Higher Education* (pp. 14-25). New York, NY: Routledge.
- Bronkhorst, L. H., Meijer, P. C., Koster, B. & Vermunt, J. D. (2011). Fostering meaning-oriented learning and deliberate practice in teacher education. *Teaching and Teacher Education*, 27(7), 1120-1130
- Brookhart, S. (2001). Successful students' formative and summative uses of assessment information. *Assessment in Education*, 8(2), 153-169.
- Carless, D. (2006). Differing perceptions in the feedback process, *Studies in Higher Education*, 31(2), 219-233.
- Chappuis, S. and Stiggins, R. (2002). Classroom assessment for learning. *Educational Leadership*, 60(1), 40-43.
- Craddock, D. & Mathias, H. (2009). Assessment options in higher education. *Assessment & Evaluation in Higher Education*, 34(2), 127-140.
- Crick, R. D. (2007). Learning how to learn: the dynamic assessment of learning power. *The Curriculum Journal*, 18(2), 135-153.
- Earl, L. M. (2003). *Assessment as Learning: Using Classroom Assessment to Maximize Student Learning*. Thousand Oaks, Calif.: Corwin Press.
- Entwistle, N., & Walker, P. (2000). Strategic awareness within sophisticated conceptions of teaching. *Instructional Science*, 28(5-6), 335-361.
- Expert Group on Assessment (2009). *The Report of the Expert Group on Assessment*. Retrieved on 29 August 2011 from:
<http://publications.dcsf.gov.uk/eOrderingDownload/Expert-Group-Report.pdf>
- Eun, B. (2011). From learning to development: a sociocultural approach to instruction. *Cambridge Journal of Education*, 40(4), 401-418.
- Garratt, D. (2011). Reflections on learning: widening capability and the student experience. *Cambridge Journal of Education*, 41(2), 211-225.
- Gibbs, G. (1999). Using assessment strategically to change the way students learn. In S. Brown and A. Glasner (Eds.), *Assessment matters in higher education: Choosing and using diverse approaches* (pp. 41-54). Buckingham: Open University Press.
- Gibbs, G. & Simpson, C. (2004) Conditions under which assessment supports students' learning. *Learning and Teaching in Higher Education*, 1(1), 3-26.

- Hargreaves, E. (2011). Teachers' feedback to pupils: 'Like so many bottles thrown out to sea'? In R. Berry, & B. Adamson (Eds.), *Assessment Reform in Education: Policy and Practice* (pp.121-133). Dordrecht, Netherlands: Springer.
- James, M. (2006). Assessment, teaching and theories of learning. In J. Gardner, *Assessment and Learning* (pp. 47.-60). London: Sage.
- James, M., Black, P., McCormick, R. & Pedder, D. (2007). Promoting learning how to learn through assessment for learning. In M. James, and R. McCormick et al. (Eds.), *Improving Learning How to Learn: Classroom, Schools, and Networks* (pp.1-29). NY: Routledge.
- Klenowski, V. (2009). Assessment for learning revisited: an Asia-Pacific perspective. *Assessment in Education: Principles, Policy and Practice*, 16(3), 263-268.
- Klenowski, V. (2007). Book Review: Assessment and learning. *Assessment in Education: Principles, Policy & Practice*, 14(2), 269-274.
- Kember, D. (2004). Misconceptions about the learning approaches, motivation and study practices of Asian students, In M. Tight, *The RoutledgeFalmer Reader in Higher Education* (pp.37-52). London: RoutledgeFalmer.
- Knight, P. T. (2003). Summative assessment in higher education: Practices in disarray. *Studies in Higher Education*, 27(3), 275-287.
- Marsh, C. (2009). *Key Concepts for Understanding Curriculum (3rd Ed.)*. London & New York: RoutledgeFalmer.
- Munns, G. (2005). School as a cubbyhouse: tension between intent and practice in classroom curriculum. *Curriculum Perspectives*, 25(1), 1-12.
- Murphy, R. (2006). Evaluating new priorities for assessment in higher education. In *Innovative Assessment in Higher Education* (pp. 37-47). New York, NY: Routledge.
- Nicol, D. J. & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199-218.
- Race, P. (1999). Why assess innovatively? In S. Brown & A. Glasner, *Assessment Matters in Higher Education* (pp. 57-70). Philadelphia, PA: Open University Press.
- Rose, R. (2002). Teaching as a "research-based profession": Encouraging practitioner research in special education. *British Journal of Special Education* 29(1), 44-48.
- Saddler, D. R. (2005). Interpretations of criteria-based assessment and grading in higher education. *Assessment & Evaluation in Higher Education*, 30(2),175-194
- Shipman, D., Aloi, S. L. & Jones, E. A. (2003). Addressing key challenges in higher education assessment. *Journal of General Education*, 52(4), 335-346.

- Stansfield, M. (2001). *Introduction to Paradigms: Overview, Definitions, Categories, Basics, Optimizing Paradigms & Paradigm Engines*. Victoria, B.C: Trafford.
- Vygotsky, L. S. (1978). *Mind and Society: the Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Watkins, C., Carnell, E. and Lodge, C. (2007). *Effective Learning in Classrooms*. London: Paul Chapman.
- Weaver, R. G., & Farrell, J. D. (1997). *Managers as Facilitators: A Practical Guide to Getting Work Done in a Challenging Workplace*. San Francisco, CA: Berrett-Koehler Publishers.
- Young, S. (2008). Theoretical frameworks and models of learning: tools for developing conceptions of teaching and learning. *International Journal for Academic Development*, 13(1), 41-49.

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