The development of a self-assessment learning style instrument for higher education

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Abstract
All individuals deserve to be taught in a way that best suits their needs. Education should be aimed at promoting learning. In order to do so, educators should incorporate diversity into their model of teaching by acknowledging student individuality, which is expressed in different learning styles. A qualitative study was done to analyse, describe and make sense of the meanings of the phenomenon learning style. One of the phases of the study entailed the development of a self-assessment learning-style instrument. Although various learning-style instruments exist, there are numerous reasons for inaccessibility thereof. A process of analysing existing instruments and adaptation was used to construct a new self-assessment learning-style instrument, based on the Kolb model of experiential learning, which should be used by all students and educators in order to improve the quality of teaching and learning. It is further recommended that the instrument be tested for reliability in order to increase its contribution to quality in higher education.

INTRODUCTION
Quality in higher education has become a highly controversial and debated concept (HEQC 2004). As part of its policy development, the Department of Education has instituted a Higher Education Quality Committee (HEQC), which conducts regular quality audits in higher education. One of the many aspects included in their quality audits, comprises the internal and external quality of teaching and learning and the way in which a programme responds to the diversity of the student population. Internal quality develops as an individual gains self-knowledge and reaches a level of self-actualisation. External quality refers to quality in the educational environment, which leads a student to reach a level of internal quality. The modern consumer society, of which students in higher education are part, is liberated and wants a say in the educational programmes and, as consumers with all the rights and protection of consumers, they are demanding quality (Vroeijenstijn 2001, 66). Therefore, students’ individual needs should be addressed, including their need to learn how to learn and a need for acceptance of their individual differences as, amongst others, expressed in learning styles.
Individuals of all ages and intellectual capacities learn in ways that differ dramatically. Individuals, more specifically students, and learning cannot be separated. Students have a need to be valued as individuals with their own individual characteristics and differences and deserve to be taught in a way that best suits their needs. Individual differences in the learning process are thus a reality, posing a challenge for educators. Different students approach learning situations differently. Although this is common knowledge among experienced educators, they nevertheless continue to educate diverse groups in the same way and in the way educators prefer to learn. Educators are faced with situations where they have to change their approaches to the educational process, move away from the safe traditional practices, and become facilitators of learning in a more flexible way. Innovative, creative approaches to education that enhance the ability to learn more efficiently and effectively, and ultimately promote quality in learning should be implemented. Diversity should be incorporated into their model of education or styles of teaching to enhance quality in higher education.

A learning style is the way in which an individual perceives or observes information and previous experiences, and processes and organises it to gain meaning (Van Rensburg 1995, 17). These styles reflect the unique way each individual gathers and processes information. Understanding learning styles can help both student and educator to develop a more constructive, successful relationship. This understanding could assist educators in maximising the educational environment, thereby facilitating students’ educational goal attainment (Linares 1999, 409). Assessing learning styles focuses on an understanding of similarities and differences in how students approach the learning process, one of the aspects of reaching the goal of quality education. Careful consideration should be given to the reasons for assessing learning styles. It is not merely an exercise to identify ‘interesting’ characteristics of students. Learning style assessment entails abstract conceptualisation and should be approached in a professional manner.

The South African student population consists of individuals with different educational backgrounds and a variety of at least eleven different first languages. A need for a learning-style instrument that is valid, reliable, convenient, and specifically designed to meet the needs of a diverse student population such as the South African population became necessary. Assessment of learning styles should be done by using an instrument for measurement. Although an important step forward in the assessment of learning styles would be further validation of the most promising instruments already available, the lack of instruments suitable for the specific needs identified warranted the need for an accessible, user-friendly learning-style instrument.

To meet this need, a learning-style instrument was constructed through a process of adaptation and construction.

**LEARNING STYLES**

In order to understand the concept *learning style*, an exploration of its meaning is necessary. Learning styles derive from generalised differences in learning orientations
based on different approaches (modes) to the learning process, which are expressed in
behaviour patterns in the learning process. To understand the concept learning style,
one has to accept individuality within the learning process. This means that both the
educator and the student should realise and accept the necessity to identify learning
styles when engaging in the learning process. Wicks (1991, 9) explains the process
of identifying and acknowledging learning style as a process of valuing individual
differences and embracing them as insight. To assist educators in developing an
understanding of what differences in learning styles entail and to enable them to
use this understanding in developing quality education, an analytical approach to
learning style is important.

Learning styles have generally been described as attributes of an individual who
interacts with instructional circumstances in such a way as to produce differential
learning outcomes. Newstrom and Lengnick-Hall (1999, 46) suggest a contingency
approach to education in which there is a move away from characterising students as
homogeneous adult students who require a uniform and single educational approach
to where the heterogeneity of students are addressed through a variety of approaches
depending on individual differences. Therefore, the early recognition of learning
styles is a significant phenomenon for educators in higher education. Ramsden
(1993, 95) explains it as being a professional approach taken to improve the quality
of learning. The issue before educators is to determine how they can personalise their
teaching based on these differences. The identification of individual learning styles
could lead to modifications in the planning of educational programmes, learning
environments and administrative strategies (Joughin 1992, 6).

Although widespread agreement supports the existence of individual differences,
learning-style researchers define the concept differently. A variety of characterisations
of learning styles have been proposed, sometimes causing confusion. Fortunately,
the different conceptions, although distinct, are overlapping, rather than mutually
exclusive.

Specific criteria emerged from the analysis of various definitions of learning
styles. Learning styles
• are individual differences
• are unique ways of perceiving information
• are processes of organising information and learning experiences
• can be consistent or changeable, depending on the situation
• are approaches to learning or ways of engaging in learning
• involve attitude towards the learning situation and material
• demonstrate cognitive processes
• determine the ways of problem solving and processing information.

Learning styles are not merely study skills but are higher-order cognition, which
includes planning, monitoring, checking, revising and self-testing. Learning styles
are therefore described as attributes, characteristics and qualities of individuals that
interact with instructional circumstances in such a way as to produce differential
learning achievements. Students are categorised in terms of the educational conditions under which they are most likely to learn and the amount of structure they require for learning to occur. Learning styles encompass sensory partiality, perceptual preferences and those environmental factors that are most conducive to learning. A clear explanation of what a specific learning style entails would have to be based on the learning-style model that is adopted.

In the study on which this article is based, the Kolb model of experiential learning was used to describe learning styles. He proposes a model that combines experience, perception, cognition and behaviour (Kolb 1984). Kolb (1984, 40–41) describes the process of experiential learning as a four-stage cycle involving four adaptive learning modes, namely concrete experience, reflective observation, abstract conceptualisation and active experimentation. The model further identifies four basic learning styles, namely convergent, divergent, assimilative and accommodative learning styles.

To gain an understanding of similarities and differences regarding students’ approach to the learning process, a form of assessment thereof is necessary.

ASSESSMENT OF LEARNING STYLES

Assessing learning styles focuses on an understanding of similarities and differences in how students approach the learning process. If one cannot identify learning styles, it is hard to demonstrate that they even exist. Assessment of learning styles is just as important in education as understanding and making sense of the theory of individual differences in learning styles. To Grimes (1995, 422), learning-style assessment provides diagnostic and prescriptive information. Diagnostic information includes the identification of the different learning styles of a diverse group of students. Prescriptive information includes the specific learning characteristics and preferences, and has implications for modification of traditional educational programmes.

A learning-style instrument provides a means of identifying learning activities that need to be developed and a means of assessing perceptions of changes in levels of skill in different learning activities in the learning process. This identification of learning activities can form part of the basis for planning learning experiences by structuring learning environments that emphasise the use of a variety of learning activities. Learning experiences facilitate the transition from student to professional person or practitioner.

The results of learning-style assessment are indicators of how an individual currently translates information presented within an educational experience. Initial identification of learning styles and the matching of educator behaviours could significantly impact on academic achievement early in a programme. Language inevitably plays an important role in students’ mastery and command of information and skills. The importance of the language medium of education was confirmed in a study done by Fraser and Nieman (1996, 194). Perhaps the greatest single advantage in using a learning-style instrument is that the educator becomes more aware of students as individuals with diverse backgrounds.
Learning-style assessment is not merely a process of identifying a learning style and then applying the knowledge. Careful attention should be given to the advantages and disadvantages of the assessment, and also to the selection of the instrument. A learning-style instrument is useful to gauge the profile of a student or a group of students who are in a learning situation or who are required to undertake group or project work, especially in the outcomes-based approach used in South Africa. For an individual student, the advantage lies in self-knowledge and for the educator in knowledge of his or her students. For group or project work, the advantage is that the group as a whole may have a balanced profile or may be more represented on some learning styles and less on others. Balanced groups can be formed so that the advantages of different learning styles can be employed by the group and the educator. This way, learning experiences are enriched. It is acknowledged, however, that learning-style profiles cannot be the sole criterion for group formation.

The disadvantage of using a learning-style instrument lies in the danger of stereotyping students on the basis of learning style. It may result in a self-fulfilling prophesy, where students assume that they are not capable of acquiring other learning styles or of adapting to situations. Students need to know that both dominant and non-dominant learning characteristics and preferences are necessary to optimise the learning process. The same argument applies to groups working together. An individual cannot refuse to participate in group work because the activities are not congruent with or dominant of his or her learning style.

**REQUIREMENTS FOR A SUITABLE LEARNING-STYLE INSTRUMENT**

Various learning-style instruments exist. However, many of these instruments are not used because the analysis of the instruments is difficult and not always possible without the help of the developer of the instrument or an expert on the instrument. Assessment of learning styles is consequently often neglected.

There are also ways of doing a quick assessment (assessment without using a learning-style instrument) of learning styles. A quick assessment normally involves showing students a list of teaching strategies during an orientation and training programme. They have to select those that are their preferred method of learning. By doing this quick assessment, students can be grouped into different learning-style categories (Chase 1995, 47). Quick assessment is not accurate and does not identify individual learning characteristics and preferences, and is therefore not of much use. Students also often select a teaching strategy that involves the least effort. Quick assessment of learning styles is therefore not recommended for higher education because of its low value.

Using a learning-style instrument is not only relevant to educators in the field of higher education, but also to any other individual who is engaged or intends to become engaged in the learning process. Terms that are used in the field of education are not always part of layman’s language. Not all students or other users of a learning-style instrument will necessarily be able to understand the context of terms.
such as *intuitive* or *receptive* which are used in the instrument. For someone who is not directly involved in learning as a concept or in the educational field it may be impossible to place such terms in context. This is an important aspect when deciding on a suitable learning-style instrument. In the study on which this article is based, a specific requirement for an instrument was that the items or questions included in the learning-style instrument had to be in the form of full sentences to put the meaning of the item or question in context and to make it more understandable.

Another important aspect is the population who is going to use the instrument. A population may be very diverse with regard to language differences, as is the case with the South African and African student population. South Africa has eleven official languages, but the language of higher education in this country is mainly English. Most students from the South African population thus study in a language other than their first language. The same argument also applies to educators in this country.

The level of difficulty with regard to language is also an important aspect to consider when selecting a learning-style instrument. Thus, an important requirement for making a learning-style instrument more accessible, valuable and user-friendly is recognition of differences among individuals. The linguistic differences among a population should not deny each user an equal opportunity of using such an instrument.

Before a decision can be made on whether an existing instrument can be used, adapted, changed or used, certain aspects have to be considered. In the study on which this article is based, the following aspects were considered:

- **Access to existing instruments**: Some instruments are copyrighted, and such licensed instruments require approval and payment of a fee. Some such instruments may only be used by registered psychometricians. Access was an important aspect in deciding on an existing instrument as it was important that the instrument be readily available, affordable and simple enough for self-assessment by adult students.

- **Level of sophistication of instrument**: In some instances access to highly sophisticated instrumentation or technology is necessary to use or analyse an instrument. Such instruments were specifically excluded as they impeded self-assessment, and were therefore not regarded as suitable for a diverse population who do not always have access to technology.

- **Validity and reliability**: These characteristics are essential parameters. Not all instruments have been tested for validity and/or reliability, or reports on these characteristics are not available. Thus, those instruments with inadequate reports on validity and reliability were not considered.

- **Relevance of instrument**: An instrument may have been developed for a highly technological environment, management situation or for the learning environment. Instruments cannot always be applied to all situations or contexts.
without some adaptation. This is often a problem where the population has diverse characteristics. In this research, an instrument that was applicable to higher education was needed.

**RESEARCH METHODOLOGY**

A qualitative, non-empirical research study was conducted. Mouton (2001, 144) describes conceptual studies, philosophical analyses, as well as theory and model building as non-empirical research. The research questions for non-empirical research include questions of meaning and explanation, of theoretical linkages and coherence between theoretical propositions, questions related to the explanatory and predictive potential or conceptual models. In theoretical and conceptual studies, the typical use of this design is aimed at developing new frameworks, models and theories or refining existing ones. The mode of reasoning is through inductive and deductive strategies. The purpose of theoretical inquiry or analysis into learning styles was to critique learning-style theories and research, and to construct a learning-style instrument by means of which the essential nature and structure of individual differences within the learning process could be made distinct and applicable to higher education.

The logical process used in the study on which this article is based, contained four phases. The first three phases encompassed an analysis and exploration of the concept *learning style* and related phenomena, an analysis of learning-style instruments and the construction of a new instrument, and the construction of a conceptual model. These phases did not occur separately, but were in fact interrelated, and thus dynamic. The fourth phase dealt with the evaluation of the new learning-style instrument and the conceptual model, after which both the instrument and the model were finalised. This article reports on the second phase of the research during which existing learning-style instruments were analysed and a new instrument was constructed as well as a part of the fourth phase during which the instrument was evaluated.

**THE PROCESS OF DEVELOPMENT**

During phase two of the study, a theoretical analysis of existing instruments was done to determine their uses, strengths, weaknesses, applicability, validity, and reliability. The aspect of applicability to the context of higher education was very important.

The following step was to analyse the existing learning-style instruments in order to make a decision as to whether an existing instrument could be adapted and/or changed or used as is. Nine existing learning-style instruments were analysed in order to determine the necessity of a new learning-style instrument. During the thorough analysis of existing instruments, the appropriateness of each instrument was considered. The terms and concepts used in the instruments had to comply with the specific needs of a learning-style instrument. The instrument had to address diverse linguistic characteristics, which entailed that it had to be written in understandable language. Another specification for the instrument was that it had to be a self-
assessment instrument, which empowers users to personally identify their learning style. Psychometric characteristics such as validity and reliability of the instruments were also important, because these are central issues in all measurements.

A systematic process of analysing nine existing instruments was followed (including the Kolb Learning Style Inventory, Marshall and Merritt Learning Style Questionnaire, Honey and Mumford Learning Style Questionnaire). After the analysis of the instruments, the conclusion was drawn that none of them on its own adhered to the specific requirements set in the study. A systematic process of adaptation and development was then followed to construct a new instrument. The requirements set for the new instrument is that it had to serve as a supplement to the profession of an educator as well as a medium to measure learning styles and to support the student in the learning process. The process of construction entailed the following steps:

- Selecting an existing valid and reliable instrument that could be used as a basis for the construction of a new instrument.
- Determining or considering the appropriateness of each instrument. None of the instruments that were analysed complied with the specific need for use by a linguistically diverse group of students.
- Linguistic assessment of the instruments was done to determine the difficulty level of the language used in the instruments, as this was a major issue in the decision to develop a new instrument. Van Ede (1996, 154) identifies important requirements for evaluating the language of an instrument. These include that sentences should be simple and short, items should be written in the active voice, items should not contain metaphors and colloquialisms, adverbs and prepositions such as ‘beyond’ and ‘frequently’ and vague terms such as ‘perhaps’ or ‘probably’ should be avoided.
- Psychometric characteristics, namely validity and reliability, were analysed by reviewing the existing literature.

**THE LEARNING-STYLE INSTRUMENT**

The new instrument, known as the *Learning Style Assessment Tool* (LSAT), was constructed to comply with student needs in all disciplines of higher education.

The LSAT is partially based on two existing instruments, the Kolb Learning Style Inventory and the Marshall and Merritt Learning Style Questionnaire. Both these instruments are based on the Kolb model of experiential learning. The results of a previous study were also used to ensure that those items of the Marshall and Merritt Learning Style Questionnaire that had a factor loading lower than 0.20 during the factor analysis at that stage were again evaluated theoretically and found to be descriptive of the factors in a specific learning mode (Van Rensburg 1995, 140–142). The items for the new instrument were constructed through a process of factor and content analysis (Van Rensburg 2002, 203).
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The new learning-style instrument consists of 40 sentence items, written in simple and understandable language, using opposites on the two dimensions of the Kolb model of experiential learning to explain the items (Van Rensburg 2002, 221–225). In order to make the instrument user-friendly, the items were formulated in full-sentence statements to clarify the adjectives that describe the learning characteristics and preferences of each learning style within the learning context. Items also accommodate the diverse linguistic needs of a student population with a variety of first languages. Careful attention was therefore given to the level of English in order to make the items understandable for a person with a first language other than English.

Below are two examples of items. Where spontaneous is a characteristic of the concrete experience learning mode compared to questioning, which is a characteristic of the abstract conceptualisation learning mode, the item would be:

I prefer to make a decision spontaneously rather than first questioning the situation or problem.

Where sensing is a characteristic of the concrete experience learning mode compared to thinking, which is a characteristic of the abstract conceptualisation learning mode, the item would be:

I can apprehend in advance when I have to make a decision and do not have to think a problem over.

The LSAT thus measures an individual’s relative preference for each of the four learning modes in the Kolb model of experiential learning.

Important advantages of the LSAT include the following:
• it can be completed in a short period of time
• the scores obtained can be mapped directly onto the Kolb model of experiential learning cycle
• learning styles can be identified immediately
• the results can be used or applied immediately by supplying students with an explanation of their own learning characteristics and preferences.

The LSAT comprises three sections, namely the response continuum, the scoring procedures, and an identification and explanation of the different learning styles.

For each item on the response continuum, the user should agree on the extent to which the item describes his or her learning characteristics and preferences, using the numerical values provided to score for each of the learning modes of the model. There cannot be a correct or incorrect response, and all the responses are equally acceptable. The aim of the instrument is to describe how an individual prefers to learn, not to evaluate learning abilities. It therefore explains how information is processed. Individual learning styles determine the responses and categorise the user into one of
the learning styles identified by the Kolb model of experiential learning. Instructions are given about how to use and analyse the new instrument. Accompanying guidelines for the interpretation of results enable the user to identify his or her strengths and weaknesses (dominant and non-dominant learning characteristics and preferences) with regard to individual learning styles and approaches to the learning environment.

After completion, the user obtains a total score for each of the learning modes of the model by adding up the numerical values assigned to the items in a particular learning mode. For example, the user calculates the numerical values assigned to all the items on the concrete experience mode. This is done for all four learning modes. The four totals (scores) represent the user’s relative emphasis on the different learning modes of the Kolb model of experiential learning. The concrete experience (CE) and abstract conceptualisation (AC) modes form the ACCE dimension and the reflective observation (RO) and active experimentation (AE) modes form the AERO dimension. Combination scores of the learning modes form the four learning styles identified by Kolb (1984). Combination scores are computed by subtracting the concrete experience (CE) score from the abstract conceptualisation (AC) score (AC minus CE), and the reflective observation (RO) score from the active experimentation (AE) score (AE minus RO). The combination scores measure the extent to which an individual emphasises abstractness over concreteness (ACCE) and the extent to which an individual emphasises action over reflection (AERO) in learning. Using the combination scores, the instrument delineates four different types of learners. The LSAT allows the user to plot the score on a diagram that places the user in one of the four quadrants of the Kolb learning style model, namely the diverger (relies on concrete experience and reflective observation), the assimilator (relies on reflective observation and abstract conceptualisation), the converger (relies on abstract conceptualisation and active experimentation), and the accommodator (relies on active experimentation and concrete experience). The user furthermore receives an explanation of the learning characteristics and preferences of each of the learning styles.

**EVALUATION OF THE LSAT**

Part of the final phase of the study on which this article is based, was the evaluation of the new instrument. The purpose of this phase was to clarify the psychometric characteristics. The LSAT was presented mainly for determining validity as it was not the purpose of the study to measure the reliability of the instrument, except for a Cronbach’s Alpha coefficient to determine internal consistency. Reliability tests have to be done over time, in more than one study, and be compared with results of another reliable instrument. This could be regarded as a limitation of the current study, implying opportunities for further research.

The instrument was exposed to different categories of participants for evaluation. The participants comprised 60 key participants (students) and 10 general participants (educators, a linguist, a statistician and psychologists).
The evaluation revealed the following aspects:

- Participants had difficulty in understanding the plotting of the scores on the diagram. Subsequently, changes were made to the instructions in order to simplify this.

- The majority of the participants felt that the instrument has the potential to be used in higher education as well as in group or team work. They also indicated that the instrument was not too difficult to use by someone who does not have knowledge of the concept learning style.

- Participants described the use of the instrument as a contribution to knowledge of the self that will contribute to better performance.

- It was clear that participants interpreted the assessment of learning styles as a form of support and caring by the educators and an expression of interest by the educators in the students as individuals.

- Further comments indicated that the identification of learning styles should be done before students enter higher education to prepare them for the learning process and thus contribute to motivation and performance.

- The LSAT was also described as a tool for support in the clinical/practical field where groups and teams work together and are dependent upon one another.

The instrument is a self-assessment tool, which requires the user to do basic calculations. In order to determine whether participants were able to do the calculations and whether errors in the calculations caused incorrect results, the scores obtained by participants were also calculated by computer and then compared to the manually calculated scores. This exercise was done to establish the practically significant differences in scores obtained by participants and computations. Although not all participants calculated their scores correctly, the differences mainly ranged between 1 and 3, but never exceeded 5. Such a small difference in score should not make a major difference to what learning style is identified. It was thus concluded that the scoring procedures of the instrument can be regarded as easy enough for the instrument to be a self-assessment instrument.

Although it was a qualitative study, a quantitative method was also used during the evaluation of the instrument. The Cronbach’s Alpha coefficient was applied to 60 completed instruments to determine the reliability of the 40 items used in the new instrument, thus to estimate the internal consistency of the items on a scale (where items were grouped on four scales representing the four learning modes).

Although 60 is a fairly small number, the results indicated that the instrument has an acceptable level of internal consistency. In the Social Sciences, a sample size of 60 elements is regarded as acceptable (Grobler and Myburgh 2001, 10). Further tests on larger numbers of completed instruments are however necessary to verify these results.
After evaluation of the instrument, certain changes were made to increase its validity and usability. Although the instrument still has to be exposed to different reliability tests to increase its reliability, it was found to be valid and it may thus be used within the context of higher education to assess learning styles.

CONCLUSIONS

Although there is no unified conceptual description of learning styles, there is enough evidence to support the contention that such an educational entity exists at the paradigmatic level. Knowledge of learning styles provides a potentially powerful basis for educational guidance. A wealth of scientific information is made available, which may help the student and the educator to individualise learning. This does not imply, however, that educators should no longer teach groups of students with different learning styles at the same time. This has relevance for both the course of individual learning in various subject matter areas and for the nature of student-educator interactions and social behaviour in the learning environment. Certainly the direction of higher education should be towards obtaining more detailed knowledge of the individual learning styles of students.

Learning-style awareness, which includes learning-style assessment, is seen as a prerequisite for effective self-development. This includes encouraging individuals to build on and improve all their learning-style attributes and to select learning activities that will maximise learning.

The LSAT was developed through a process of adaptation, formulation and construction after an analysis of existing learning-style instruments. Specific attention was given to ensure that it is a user-friendly self-assessment instrument. Requirements regarding its structure, content, practical implementation and validity were of utmost importance. Furthermore, the Cronbach’s Alpha Coefficient was used to estimate the internal consistency of the items of the instrument.

The LSAT is an instrument that empowers the user with self-knowledge. It advises educators to become aware of their students’ learning styles, which will enable them to adapt their approaches to the educational environment. Acknowledgment of individual differences among students is an acknowledgment of the educator’s interest in their students as holistic beings.

Steps should be taken to promote effective learning through the use of learning styles. Professional development activities on the use of learning styles in improving education and learner development should go beyond traditional practices. The first step should be to assess one’s own learning style. It is recommended that the use of the LSAT be implemented throughout the higher education field. Furthermore, ongoing workshops, seminars, instructional improvement projects, and other functions can be very useful in helping educators, learners and managers understand the importance of a sensitivity to and knowledge of learning styles.

Further research to measure the reliability of the LSAT is recommended. Reliability tests in more than one research project have to take place over time. Results should
then be compared with those of another reliable instrument. Evaluation of the instrument furthermore needs to be extended and replicated. A test-retest study over an extended period is necessary and confirmatory evidence of the factor structure is desirable. Stability studies are necessary with further experimentation with scoring formats as a way to improve the instrument’s reliability.

It is trusted that this article will provide knowledge that leads to a deeper understanding of learning-style individuality among both students and educators and that it will support educators in becoming successful facilitators of learning and innovative educational practitioners. The reality is that individuals learn differently. This is appropriately expressed in the following quotation: ‘If a man does not keep pace with his companions, perhaps it is because he hears a different drummer. Let him step to the music which he hears, however measured, or far away’ (Thoreau 1963, 246).

REFERENCES

HEQC, see Higher Education Quality Committee.
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