Assessment Practices in Teacher-preparation Programs in Higher Education in Lebanon

Ahmad Shatila¹ Nisrine Adada² Mona El-Chami³

Abstract

The purpose of this study was to examine the assessment practices in teacher education programs in Lebanon in a number of participating universities. The following dimensions of assessment were set as a framework of analysis: the presence of clear program/department outcomes, direct and indirect assessment of these outcomes, frequency of assessment (multiple administrations), use of various ways of assessment, and implementation of alternative, authentic, and self-assessment. Data were collected through an openended questionnaire, syllabi of different categories of courses, and university catalogues. Results showed that: indirect assessment of program outcomes is almost absent; a heavy emphasis on paper-pencil exams still prevails, with high weight attributed to this form; usage of alternative forms of assessment is more evident in practicum courses than in other categories of courses; and opportunities for self, authentic, and formative assessment are still minimal.

¹ Ahmad Shatila, Assistant Professor, Academic Director, Global University; PhD in Science Education (emphasis in Chemistry), University of Southern Mississippi (2007). ahmadshatila@hotmail.com

² Nisrine Adada, Assistant Professor, Head of Education Department, Global University; PhD in Educational Leadership, University of Southern Mississippi (2007). nisrineadada@hotmail.com

³ Mona El-Chami, Instructor, Education Department, Global University, MS in Science Education, American University of Beirut (2005), Working on PhD in Education USJ. mshami@gu.edu.lb

I. Introduction

This research is an integral part of a research project conducted by the UNESCO office in Beirut. Global University in addition to 10 other private universities and the Lebanese University collaborated to conduct this research project. The purpose of this initiative is to foster cooperation among the Education departments in public and private Lebanese higher education institutions in a movement toward professionalizing the teacherpreparation programs in Lebanon. Participating institutions of higher education in the project set out to conduct studies to analyze various aspects of different teacher-preparation programs. These include topics such as, curriculum requirements and orientations, general education requirements, core requirements, practice teaching, assessment and evaluation, teaching methods, admissions and graduation requirements, citizenship, and gender-related issues. Global University undertook the research on "assessment and evaluation." Research on assessment and evaluation is most critical because: 1) it is a major component of quality assurance in higher education when done appropriately and effectively, and 2) it serves as a steering guide for planning learning interactions. According to El Amine (2008), it is important to carefully align assessment and evaluation procedures with the goal of teacher preparation, which is preparing pre-service teachers to become reflective, self-regulated problem solvers who make decisions that ensure successful outcomes for their students. Educators nowadays are moving away from a testing culture, in which tests are the only means of evaluation, to an assessment culture, where evaluation is based on: formative assessment, self and peer assessment, authentic assessment, and portfolios.

The following research question was set to conduct this study: What are the assessment practices in teacher preparation programs in Lebanon?

To address this research question, the researchers developed a framework. The framework was based on important trends in assessment, in order to see how assessment practices of various teacher-preparation programs are in line with these assessment innovations. The researchers used an open-ended questionnaire sent by e-mail to Heads of Education Departments of the universities included in the study, analysis of syllabi

of various courses, and analysis of University/Institutional catalogues/ folders to ensure triangulation of findings. The results showed that: many higher education institutions still rely heavily on paper-pencil exams: indirect assessment of program outcomes is almost absent: alternative forms of assessment are more evident in practicum courses than other courses; and opportunities for self, authentic, and formative assessment are still minimal. The study had a few limitations. Some difficulties were faced in collecting data and analyzing them. Some of the answers on the questionnaire were not relevant or not clear. On the other hand, sometimes the syllabi provided no or little information regarding assessment; this hindered gathering information regarding the ways of assessment used. frequency of assessment, and the implementation of self-assessment. Most of the syllabi presented detailed information of course outline or schedule, number of assessments used, and grade distribution, but little information regarding the nature of the tasks and their requirements which made the researchers' work difficult.

II. Literature Review

1. Theoretical Framework

At its early stages, assessment in many European countries meant testing students on questions and answers that were extensively practiced in the years before. Today, many professionals in the education field have shunned away from these methods and what they are rather looking for in assessing students is testing their critical thinking skills and their ability to transform theory into practice. There is, however, still a lot of debate about the reliability of assessments and arguments for and against particular kinds of assessments used in higher education.

Unlike K-12 schools where the reform of assessment has been a key in bringing about improvements, higher education tended to commit to traditional form of assessment. As Boud put it: "students can, with difficulty, escape from the effects of poor teaching, they cannot (by definition, if they want to graduate) escape the effects of poor assessment." (Boud, 1995, p.35).

With the continuous pressure to move the higher education sector toward professionalization, and to ensure quality assurance in our teaching

preparation programs as recommended by the UNESCO conference in 2008 (El Amine, 2008), our assessment practices should be inline with international standards and innovative assessment practices.

2. New Trends in Assessment

The field of education has been experiencing several changes in the last years as have many other disciplines. In particular there have been long debates about the various methods used to assess students' performance as well as the effectiveness of these methods.

We are now witnessing a shift of paradigm in the assessment field from a testing culture, in which tests were the only means of evaluation, to an assessment culture. The aspects of assessment culture can be portrayed in six continua: The first continuum refers to a shift from the so-called objective test with item formats such as short-answer, fillin-the-blanks, multiple choice, and true/false to the use of portfolio assessment, project-based assessment, and performance assessment. The second continuum shows a tendency from describing a student's competence with one single measure towards portraying it by student's profile based on multiple measures. The third continuum depicts the movement from low levels of competence towards high levels of competence. This is the move from mainly assessing reproduction of knowledge to assessing high-order thinking skills. The fourth continuum refers to the multidimensionality of intelligence. Intelligence is more than just cognition; it is reflected not only in meta-cognition, but also in the affective, social, and psychomotor dimensions and skills. The fifth continuum concerns the move towards integrating assessment into the learning process. To a growing extent, the strength of assessment as a tool for dynamic ongoing learning is stressed. The sixth continuum refers to the change in responsibilities, not only in the learning process but also in the assessment process. The increasing implementation of self and peer assessment is an example of this shift from teacher to student responsibilities (Kulieke et al., 1990).

In the following section, the researchers will discuss each trend in assessment separately and what benefits it offers to student learning.

3. Formative Assessment

The main objective of formative assessment is to provide students with prompt feedback about their performance. Formative assessment can be formal or informal. Formal formative assessment aims at assessing the students' performance on particular curricular framework. This can take place by the assessor simply going over the students' completed work. The students then receive the assessor's feedback which helps them in their learning process. Informal formative assessment, on the other hand, takes place during the course and does not necessarily assess a specific curricular standard. The assessor might give immediate feedback on students' drafts or it can take place indirectly where students see assessments given to peers and in turn evaluate their performance with reference to these. A substantial review of formative assessment showed that it is effective in promoting student learning across a wide range of educational settings (disciplinary areas, types of outcomes, and levels). Feedback given through formative assessment can have positive effects in the short as well as the long term (Boud, 2000). Without formative assessment, students might have relatively little information about their current performance in comparison to the desired level

4. Self-Assessment and Peer Assessment

Among the popular kinds of assessment used in education in latest years are self and peer assessments. These types compliment collaborative learning, a valued skill in the field of education. Self and peer assessment place more responsibility on the student and expect him/her to assess and reflect on his/her work and that of others in a critical way. This active engagement of learners in the assessment process is seen by many as an essential tool in self-improvement. Self-assessment encourages students to be active participants in the evaluation of their work, whereas peer assessment allows students to evaluate their work and compare their level to that of their peers. Peer feedback might be more readily available at times than teacher feedback, but of course not always with the same quality. Students might evaluate their peers' writings, portfolios, oral presentations, or other assigned tasks. Comments can be written on assignments, given orally, following an assessed presentation on a rubric, or given quickly during a learning activity (Yorke, 2003). These two kinds of assessments are nowadays frequently used in higher education.

5. Authentic Assessment

Another term often used for authentic assessment is performance assessment. This kind of assessment values the practical application of learned tasks in the real world. Mueller (2005) states that authentic assessments are direct measures of students' acquired knowledge and skills they have learned to perform authentic tasks. This kind of assessment engages students in active learning to evaluate whether students can apply techniques/skills to related matters. Authentic assessment might entail asking students to design posters, prepare oral presentations, and work on projects, portfolios, videos or websites. Chudowsky and Glaser (2001) note that authentic assessments provide multiple paths to demonstration of learning in comparison to traditional assessments like answering multiple-choice questions that lack variability in how students can demonstrate knowledge and skills they have acquired. Moreover, authentic assessment caters to a variety of learning styles i.e. kinesthetic, auditory, and visual since it does not only emphasize the memorizing or writing part, it rather evaluates the doing part. This helps relieve test anxiety experienced by some students.

6. Portfolio

Another method of assessing students' performance is by keeping a portfolio for each student throughout the academic teaching period. A portfolio is a collection of student's work whether drafts or final submitted assignments. Gillespie, Ford, Gillespie, and Leavell state the following: "Portfolio assessment is a purposeful, multidimensional process of collecting evidence that illustrates a student's accomplishments, efforts, and progress (utilizing a variety of authentic evidence) over time." (Gillespie, 1996, p.487). Portfolios offer several strengths as assessment tools. They usually reveal growth and development over time, disclose the students' understanding and disposition towards learning, and offer students the opportunity to interact with their instructors and reflect upon their work. Portfolios are said to encourage students to be more engaged and motivated in the learning process since they can monitor their own progress through the portfolio. Feedback given by the instructor on portfolios usually is more descriptive. It might give information on the strengths upon which further growth and development can be established. It also states reasons why performance falls short, and it offers advice that enables the learner to adjust his/her work accordingly.

III. Methodology

As indicated earlier, the purpose of this study was to examine the assessment practices in teacher education programs in Lebanon. Thus to address the research question what are the assessment practices in teacher preparation programs in Lebanon and to develop future recommendations for assessment in teacher preparation programs in Lebanon, a framework had to be developed. The framework was based on important trends in assessment, in order to see the extent to which the assessment practices of various teacher-preparation programs are inline with these assessment innovations. The framework the researchers developed catered to the presence of clear program/department outcomes, direct and indirect assessment of these outcomes, frequency of assessment (multiple administrations), use of various ways of assessment, and implementation of alternative, authentic, and self-assessment. Although formative assessment was included in the literature review, the researchers only considered the frequency because other aspects required data collection like classroom observations and interviews with teachers and students, which were beyond the scope of this study. However, frequency of assessment and the use of certain ways of assessment provided insight to formative assessment.

The study employed an open-ended questionnaire sent by e-mail to Heads of Education Departments of the universities included in the study, analysis of syllabi, and analysis of University/Institutional catalogues/folders to ensure triangulation of findings. All participating universities sent folders containing various pieces of information to help in the research. In addition, the researchers collected syllabi for: an educational psychology course, a subject-matter course, an educational assessment course, a generic instructional methods course, a subject-specific methods course, a practicum course, and a specific methods course in early childhood. A total of 12 universities offering an education program were involved in the study.

Universities in Lebanon can be classified into different categories based on the higher education model they are following: the American model, the French model – and some embraced the ECTS – and the Lebanese model structured and adopted by the Lebanese University. This study is a qualitative study that used a document analysis of syllabi and university catalogues sent by participating universities in addition to a questionnaire. Important aspects of new trends of assessment in higher education were emphasized in the instrument as discussed in the literature review. Theses aspects are: usage of a variety of assessment approaches, more emphasis on alternative assessment and authentic assessment, formative or ongoing assessment, and emphasis on self-assessment [Serger, 2003].

The framework of syllabi analysis focused on: the presence of objectives; ways of assessment used to check if assessment practices are heading toward a higher implementation of performance assessment which caters to higher-order thinking skills; weight distribution of grades; frequency of assessment which caters to continuous and periodical assessment; authentic assessment which can be emphasized through the use of authentic performance tasks, such as, lesson plans, peer-teaching, actual teaching in schools, and development of other classroom artifacts; and self-assessment which can be implemented through the use of certain assessment practices, such as, portfolios and reflective journals. Other important aspects of assessment, such as, formative assessment, peerassessment, and the alignment of objectives or outcomes with assessment were not included due to lack of time to collect sufficient and appropriate data. These aspects required classroom observations, interviews with students and instructors, and an examination of samples of assessment used in each course. Frequency and number of answers, however, provided partial information regarding formative assessment. To ensure a triangulation of data, institutional catalogues and university folders were examined for distribution of grades, number of assessments used, ways of assessment, and passing grades.

Similarly, the questionnaire consisted of eight questions tackling important aspects and new trends of assessment in Higher Education: program learning outcomes, direct and indirect assessment, ways and approaches of assessment, formative assessment, authentic assessment, and assessment of practicum courses.

IV. Results

1. Department outcomes/Course outcomes

Out of the 12 universities surveyed, 10 universities reported that their Education departments have specific learning outcomes/objectives for the program. NDU and MEU stated that their outcomes were still under development, MUBS reported no outcomes at all.

2. Assessment: Direct and Indirect

All 12 universities surveyed reported data concerning direct and indirect assessment. Out of these 12 universities only AUB reported that special care is dedicated to indirect assessment in their education program through surveys of graduate students, focus groups of graduate students, and surveys of employers.

Direct assessment was evident in all the universities except HU and MUBS. The universities stated that direct assessment was done in their courses via essays, exams, research papers, reflection papers, oral presentations, projects, and portfolios.

3. Frequency of Exams

Collecting data regarding formative assessment was not an easy task. For the researchers to be able to collect relevant, reliable and valid information, they should hold classroom observations and conduct student and instructor interviews. This was not feasible in this study, therefore, only the frequency, that is, the number of assessment tools (formative and summative) was measured based on the syllabi, university catalogues, if available, and questionnaire. (Table 1).

Table	1:1	Frequ	ency	of	Exams
-------	-----	-------	------	----	-------

KU	AUB	UOB	GU	HU	LAU	LU	MEU	MUBS	NDU	USEK	USJ
3	4-5	4	5-8	4-5	-5	2-3	6-8	-	5-8	3-4	2-4

In some universities a high frequency of assessment was reported. For example, GU, NDU, and MEU reported a number of assessments ranging from 5 to 8 per course. AUB, UOB, HU, and USEK, however, reported 4 to 5 assessments per course. On the other hand, KU, LU, and USJ demonstrated the lowest frequency ranging between 2 to 4 assessments per course.

4. Approaches and Ways of Assessment

Various approaches to assessment were reported by 11 universities. The approaches varied based on the type of courses, that is, methodology (specific and general), assessment, and psychology courses compared to practice teaching.

Paper-pencil exams, projects, oral presentations, research papers, reflection papers, and performance tasks were used to assess students' achievement in the four courses. Practice courses, on the other hand, used classroom observation, lesson plans, actual teaching, reflection papers, other classroom artifacts, and portfolios.

To make the data clearer, the researchers tried in Table 2 to classify universities into three categories based on the ways of assessment used in the four courses discussed above.

Groups	Ways/methods of assessment	Universities
1	Exam (paper-pencil), project, research paper, oral presentation, case study, performance tasks.	AUB, UOB, GU, NDU, LU, LAU, HU, USJ
2	Exam (paper-pencil), and TPC/ project (not clear)	USEK
3	Only Exams (paper-pencil)	KU

Table 2: Ways of Assessment

*MUBS presented unclear data

On the other hand, practicum courses were assessed using different ways of assessment with adoption of portfolio in some universities.

Table 3 provides a summary of the pattern used in the different universities.

Performance tasks (lesson plans, actual teaching, classroom observation, other classroom artifact), Reflection paper	Portfolio	Exam/seminar
AUB, GU, HU, LAU, MEU, NDU, UOB, USEK, LU	AUB, GU, HU, LAU, MEU, USJ	LAU (final) MEU (seminar) MUBS

Table 3: Ways of Assessment in Practicum Courses

5. Authentic Assessment

USEK

Authentic assessment was examined through the use of performance tasks, such as, lesson plans, development of classroom assessment or activities, peer-teaching, classroom observation, and actual teaching. Indicators of authentic assessment were present in the practicum course of all universities examined. (Table 4).

Universities Number of course implementing Practicum authentic assessment (out of 4) courses ΚU No info AUB 3 + UOB Not clear + GU 3 + ΗU 2 rest not clear + LAU 4 + LU 1 + MEU 0 + MUBS 2 _ NDU 4 + USJ 3

Not clear

Table 4: Authentic Assessment

+

+

LAU and NDU implemented authentic tasks in all the four courses. AUB, GU, MUBS, HU, USJ implemented authentic assessment in (2-3) courses with only one course to LU. As for other universities, the assessment tasks were not described, so no information could have been reported on the nature of the tasks.

6. Self-assessment

An important outcome of teacher preparation is to develop reflective practitioners who are able to evaluate their performance in order to improve it. Indicators of self-assessment included reflection papers and the use of portfolios.

As shown in the Table 5 most universities included a reflective component in the practicum course except for LU. Other universities reported using self-assessment in the other category of courses, with the highest use to GU and NDU. AUB, LAU, and LU reported the use of self-assessment in 2 out of 4 courses. For others, self-assessment was absent i.e, KU and USJ, or the tasks were not clear so the use of self-assessment tasks could not have been established.

Universities	Number of courses implementing self-assessment (out of 4)	Practicum courses
KU	_	No info
AUB	2	+
UOB	Not clear	+
GU	4	+
HU	1 / rest not clear	+
LAU	3/ rest not clear	+
LU	2	-
MEU	No info	+
MUBS	2	-
NDU	3	+
USJ	_	+
USEK	1/ rest not clear	+

Table 5: Self-assessment

7. Grade Distribution

University	Weight on paper-pencil exams	Weight on other tasks
KU	80%-90%	10%-20%
AUB	50%-80%	20%-50%
UOB	55%-65%	35%-45%
GU	50%-55%	45%-50%
HU	70%-75%	25%-30%
LAU	20%-50%	50%-80%
LU	60% (final)	40%
MEU	60%-75%	25%-30%
MUBS	60%-65%	35%-40%
NDU	5%-35%	65%-95%
USEK	55%-70%	30%-45%
USJ	40%-80% (final)	20%-40%

Table 6: Grade Distribution

The grade distribution reflected in Table 6 is related to all the categories specified earlier except the practicum courses. According to the data collected by the researchers and presented in Table 6, the Lebanese universities are still witnessing high emphasis on paper and pencil exams. For instance HU, KU, MEU, and USJ reported the highest weight on paper and pencil exams, with USJ reporting full weight on the final exam. Others reported a weight ranging from 50% to 70%, with LU reporting 60% fully on final exam. The lowest weight was reported by NDU ranging from 5% to 35%.

8. Practicum Courses

Out of the 12 universities surveyed, 11 reported what their instructors do in their practice teaching courses. The majority of the universities (9) stated that the base for assessing their students' achievement in

the practicum course was their actual teaching in school settings. Five universities (AUB, GU, HU, LAU, MEU, and USJ) reported that their students were assessed based on the portfolios they prepare in addition to actual teaching. These portfolios included: lesson plans, reflection papers, instructor's evaluation, assistant-teacher evaluation, and the like. Other universities, such as LU, USEK and NDU asked their students to write reports. NDU, however, added observation sheets to its assessment criteria. Balamand required its students to write lesson plans only. The researchers also found worth noting that MUBS reported no evidence of actual teaching and portfolio preparation in practice courses. On the other hand, in addition to actual teaching and portfolios, LAU and MEU, required their students to attend a seminar and sit for a final exam, respectively.

V. Discussion and Recommendations

1. Discussion

In the following discussion, the researchers tried to identify similarities and differences regarding assessment practices in Lebanese teacher preparation programs. Several similarities as well as differences were identified in assessment practices in the teacher preparation programs under study. A dominant similarity was the lack of assessment of department or program outcomes, especially through the use of indirect ways of assessment, such as, graduate surveys, employers' surveys, or focus group interviews, except for AUB. Paper and pencil exams and (end of course exams) are still playing an important part in assessment practices in terms of usage and weight attributed. The researchers could see that alternative assessment is adopted in most of the universities except for KU which reported heavy reliance and high weight on paper and pencil exams. The use of portfolio is evident in practicum courses in some universities: AUB, GU, HU, LAU, MEU, and USJ. On the other hand, in the non-practicum courses, portfolio was used at least in one course out of the 4, such as in GU, HU, and NDU. The use of portfolio ensures formative assessment through continuous feedback of student work, authentic assessment, and metacognitive skills, such, as auto-evaluation and self-regulation of learning.

Although formative assessment is among the international trends used in assessment, it was hard to establish its implementation in the departments looked at. Evidence of formative assessment requires thorough examination of assessment requirements, classroom observations, and interviews with teachers and students. Thus, the researchers tried in this study to focus on the frequency and periodicity of assessment. The number of assessments per course averaged between 4-5 with KU, LU, and USJ reporting lowest frequency between (2-4) and GU, MEU, and NDU reporting the highest frequency between 5 and 8.

The movement of higher education assessment practices towards more coursework and continuous assessment and less reliance on end of course or module assessment examination opens greater possibilities for assessment for learning, but it is important to note that this movement on its own does not guarantee a positive impact on student learning. Coursework and continuous assessment can still focus on summative purposes like assessment for grading unless genuine attempts are made to use such information to provide students with constructive feedback to enhance their future learning (Murphy, 2006).

Examining authentic assessment provided also another challenge in this study because of the lack of detailed information about the nature of the tasks and their requirements. Authentic tasks were identified in some of the courses in universities like AUB, GU, LAU, NDU, and USJ with HU, LU, and MUBS, reporting the least usage in the four courses examined. However, for other universities the lack of description of the assessment tasks hindered data analysis. Moreover, we are still witnessing heavy reliance on paper and pencil exams, with a high weight attributed to this form of assessment.

As it was mentioned earlier, we are witnessing a change in paradigm in the field of assessment, a paradigm change from a culture of "assessment of" to a culture of "assessment for learning." Assessment has enormous power of steering learning processes; therefore, if teacher preparation programs are to foster high-order outcomes, such as, preparing teachers to be decision-makers, problem solvers and reflective practitioners, assessment procedures that align best with such outcomes should be implemented. Moreover, setting up standards of academic quality assurance requires continuous assessment of program outcomes through the implementation of graduate surveys, employers' survey, and others.

Many universities nowadays recognize the importance of providing professional development training to their staff to ensure quality education. Centers for teacher training at Higher Education institutions such as the ones established recently at AUB (Center for Teaching and Learning) and USJ (Le Laboratoire de Pédagogie Universitaire) aim at training and developing effective educators through workshops and conferences. Professional development is an essential step towards implementing appropriate assessment practices.

2. Recommendations

Finally, the researchers propose the following recommendations in Lebanese teacher preparation programs regarding assessment:

- Develop department outcome goals or objectives and implement indirect ways of assessment to evaluate these outcomes and ensure quality.
- Adopt more ways of alternatives assessment rather than put heavy reliance and increased weight on paper and pencil exams (final midterm) to cater to high-order outcomes.
- Provide multiple assessment opportunities by increasing the frequency of assessment to ensure formative assessment and validity of assessment results.
- Use formative assessment by providing ample constructive feedback to students.
- Implement authentic assessment in most Education courses rather than restrict it only to practicum courses.
- Provide more opportunities for self-assessment and autoevaluation through the use of portfolios, reflective papers, and journal entries.
- Provide professional development training in assessment to all educators through workshops, conferences, seminars, and the like, at the institutional level as well as the national level.

References

- Boud, D. (2000). Sustainable assessment: Rethinking assessment for the learning society. *Studies*
- Boud. D. (1995). Assessment and learning: contradictory or complementary? In P. Knight (ed.) *Assessment for learning in higher education*, 22(2), 151-167.
- El Amine (2008). *Feasibility Study on the Forms of Cooperation for Quality Assurance in Higher Education in the Arab States*. Beirut: Unesco.
- Gillespie, C., Ford, K, Gillespie, R., & Leavell, A. (1996). Portfolio Assessment: Some questions, some answers, some recommendations. *Journal of Adolescent & Adult Literacy*, 36(6), 480–491.
- in Continuing Education, 22(2), 151-167.
- Kulieke,M., et al. (1990). *Why Should assessment be based on a Vision of Learning*? North Central Regional Education Laboratory (NCREL), Oak Brook.
- Mueller, J. (2005). The authentic assessment toolbox: Enhancing student learning through online faculty development. *Journal of Online Learning and Teaching*, 1(1).
- Murphy, R. (2006). Evaluating new assessment properties in higher education .In K. Bryan and Clegg, K. ed.) *Innovative assessment in higher education*. New York: Routledge
- Pellegrino, J.W., Chudowsky, N., & Glaser, R. (2001). Knowing what students know: The science and design of educational assessment. Washington, DC: National Academies Press Segers, M. (2003). Optimizing new modes of assessment: In search of qualities and standards. Netherland: Kluwer Academic Publishers.
- Yorke, M. (2003). Formative assessment in higher education: Moves towards theory and the enhancement of pedagogic practice. *Journal of Higher Education* 45, 477–501